THE LANCET.

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A Lecture

ON THE

RELATIONS OF PLEURISY TO TUBERCLE.

Delivered at the Brompton Hospital for Consumption and Diseases of the Chest on Nov. 8th, 1912.

BY SIR T. CLIFFORD ALLBUTT, K.C.B., LL.D., M.D., F.R.C.P., F.R.S.,

REGIUS PROFESSOR OF PHYSIC AT THE UNIVERSITY OF CAMBRIDGE, ETC.

GENTLEMEN,—When by the request of your Dean I received the honourable invitation to take part in these lectures, while on the one hand I was unwilling to decline it, yet on the other I felt myself little able to bring before you matter which had not been said already, abundantly and well, by physicians whose experience had been more concentrated upon the subject of tuberculosis. Were I to venture into this field I felt it could be only as a clinical observer, but clinical observers in this field are legion; how should I hope to add anything of value to their work? Then it struck me that for most of my medical life I had given some especial attention to pleurisy—a malady very prevalent in my old northern home—and, animated by the friendship of Bowditch, of Boston, had been engaged early in the furtherance of our knowledge of this disease and of our treatment of it, especially on the operative side. Thus I bethought me of my pleurisy file, that on it I might find some materials to serve for the present need. From its contents I have selected such memoranda, or some of them, as bear upon the relations of pleurisy to tubercle, regretting, as I do so, that in the diversion of my thoughts of late to other subjects this file has fallen a little out of date. For this, and for many other shortcomings, I must appeal to your indulgence.

ELUSIVE APICAL PLEURITIC RUBS: THEIR SIGNIFICANCE AND CAUSATION.

When I was still young in practice a man of consideration in the North Riding brought to me his son, a comely lad, then at a public school, because of a little dry cough. It was slight and occasional; still, trivial as it seemed, it did not disappear. The lad was well nourished and active, and scoffed at the notice taken of so small a matter. Moreover, a careful examination of the apices of the lungs, in front at any rate, threw no more light on the problem. But over the left apex behind, about the level of the spine of the scapula, a faint and closely limited pleuritic rub was audible; somewhat elusive indeed it was, but on close attention quite certain. Clearly in this spot was a little area of pleurisy—of what origin? In those days we were satisfied, more or less, with the attribution of pleurisy to "chill"; but could this cause be accepted for the disorder in a boy of his appearance and history, and under such conditions of limit and latency? Nay, farther, when we put chill on one side and turned to the alternative of a tuberculous pleurisy, could it be supposed that anything like a diffused tuberculosis of one pleura would be represented by this narrow streak of inflammation, a process which, as a matter of fact, did not advance to effusion, nor, indeed, to any larger manifestation, or but little more, than I have described? There was no escape from the graver view of the case, that this strip of pleurisy was but an accident in the course of a pulmonary tuberculosis, at least of the left apex. Our interpretation was only too true: the poor boy, whose life was full of promise, fell into a rather rapid consumption, of which he died, I think, within the year.

This lesson, coming as it did early in my practice, was a precious one. From that time onwards I scrupulously searched this region, on the one side or the other, for signs, however light or fleeting, of pleurisy; and not rarely some such evidence was found. A faint creak may be all that is to be heard, but its significance is in no proportion to its distinctness; as I have said, it is often very elusive. And besides, it is often simulated by some fortuitous little wheeze or chirp, generated perhaps in the larynx and to be dissipated by a cough, or in some tautness of a muscle, or again in a fold of the clothing. It may be difficult to be sure of the pleuritic origin of such a sound; you may have to test it again and again, removing any possible source of deception, if deception there be; but if after all precautions you must still refer it to the pleura, I repeat that its significance cannot be overrated. It is not far from an axiom to say that a streak of pleurisy audible at the apex in this fashion means pulmonary tuberculosis. And if it be true that the sign of which I have spoken may at any one moment be elusive, yet on the other hand it is often very persistent, and may continue for weeks together, varying with attitudes of respiration, or with lubrications of the part affected. Indeed, it seems often as if it were rather a creaking of a stiff membrane than a translation of surfaces.

Many years ago, when I had been working at tuberculosis in Leipzig with the late Professor Birch-Hirschfeld, I brought before the Section of Medicine of the British Medical Association at Portsmouth in 1899 his researches into a certain peculiar mode of development of tubercle in the lung, researches which, in my opinion, have never received the attention they deserve. Hirschfeld demonstrated that in some cases the tubercle engrafts itself in a particular spot, a spot determined by individual conditions which I will briefly indicate. If in every necropsy, instead of slicing the lung in the ordinary way, the tubes be slit open with a pair of guarded scissors from the primary divisions inwards, now and then, in a certain bronchiole will be found a tuberculous graft, a small knot formed by the inoculation of the tubercle into the mucous membrane; around this some secretions accumulate, and thus a focus, at first of "closed tubercle," is established. How this knot, ulcerating and mining its way in this direction or that, corrodes the neighbouring parts is too well known to need description in this place; suffice it to say that in this propagation it approaches the upper dome of the pleura of the side, and this may set up the subacute pleuritis of which I have spoken. I have referred to this bronchiole as "a certain bronchiole." These tubes have no several names; but this one, on either side, is anatomically recognisable; it leads upwards, outwards, and backwards; I may call it Hirschfeld's bronchiole. Now why does the tubercle affect this bronchiole preferentially? From its position and nature. From its nature because, like all such tubes, it is a spiral, a more or less concealed spiral; from its position, because its line of growth is against the action of gravitation, so that, if the elasticity of the spiral spring begin to wane, the tube will fall, or sag, into a looser and dipping curve, so that secretions, instead of clearing themselves automatically, will stagnate more or less according to the degree of the sagging, and afford here especially a nidus and culture medium for any tubercle bacilli which may drift into the lung. This explanation applies, of course, only to those cases of pulmonary tuberculosis which arise from inhalation, a mode of infection which is still admitted for some cases, and these probably not a few. Now whether these observations, which in two necropsies under my own eye, and from his museum, Birch-Hirschfeld demonstrated again and again, be verified or not, it is here, and just here, upwards, outwards, and backwards, that the little rubs arise which I have described. These rubs may long precede any dulness to percussion, or any crepitation generated inside the lung; they may arise from a propagation of irritation from the focus in the bronchiole of Hirschfeld before this focus has broken down, and become "open" tuberculosis.

"IDIOPATHIC" PLEURISY OF TUBERCULOUS ORIGIN.

So much, then, for these elusive apical rubs; on more ordinary frictions I need not dwell before this audience. Let us now proceed to consider certain points in respect of the so-called primary or "idiopathic" pleurisies, pleurisies which, whatsoever their nature, at any rate become clinically manifest as such. These are of various kinds. I have no doubt whatever that some of them are due to the rheumatic infection; from time to time I have seen a pleurisy springing up, after the manner of a pericarditis, in the course of rheumatic fever. These do not concern us to-day. Nor are we more concerned with septic pleurisies, except to remark that in these also fleeting or persistent rubs in small areas may give an alarm, as for instance in a phlebitis, as they may in a tuberculosis; but generally not quite in the same peculiar spot: the septic rubs are more prone to the subaxillary region, or over the mid lung. However, no more of these. With your permission we will turn our attention

now to ordinary serous pleurisies, not apparently secondary, those which have been usually attributed to chill and so forth. What bearing have these more conspicuous attacks upon tuberculosis, whether in the pleural cavity alone or in lung and pleura? For it is with tubercle that we are busied to-day.

It is well known to all of you that of late years attention has turned more and more to the part of tubercle in these attacks, acute and sudden as they may be—bolts from the blue. That not all acute pleurisies are tuberculous I have already stated, but how many of them are? and apart from sepsis or rheumatism how many pleurisies are due to causes, such as chill, not directly at any rate tuberculous? The French school, as you know, has been forward to throw almost all these ordinary attacks into the class of tubercle. Landouzy's papers from 1883 onwards and Le Damany's of still earlier date will be in the recollection of most of you. Landouzy would have it that almost all such attacks are in nature tuberculous.[1] And in the same year another paper, which attracted no less attention, by Kelsch and Vaillard, advocated the same thesis.[2] These authors asserted on a large basis of facts that at any rate 82 per cent. of ordinary attacks are tuberculous inflammations. Dr. Barrs,[3] of Leeds, in 1890, found in 19 out of 62 cases of pleurisy treated between 1880 and 1884 19 deaths by tubercle. Bowditch's notes were followed up by his son in 1889[4] when 38 per cent. of the pleuritic patients (1849-79) had died from tubercle.

On what evidence do these assertions depend? Not altogether on the irrefragable evidence of the post-mortem table. Happily, the large majority of cases of acute pleurisy terminate in recovery, even if at some distant time to relapse or to appear in the explicit shape of pulmonary tubercle. And again, concerning cases of death from some later incidental cause, the pleuritic surfaces and adhesions may prove negative in quality, although in origin surely tuberculous. However, to these points we will return.

Are there now any symptoms by which we may get a direct inkling of the tuberculous nature of an acute pleurisy? In ordinary cases, dry or wet, I think not; but in an interesting paper by Dr. Sidney Martin[5] the author well describes a form of pleurisy which carries its nature more or less clearly on the face of it. In this form the initial pyrexia is of the tuberculous type—an evening rise followed by a morning fall; the lungs are negative, but areas of increasing dulness may be detected in the thorax; the thoracic movements are deficient, and a rub may be heard here or there, and off and on. For the sake of diagnosis a puncture will be made, but its contents will probably be slight or negative; there is no more than a gradual thickening of the pleura; or a few ounces only of fluid are drawn off. Convalescence is very slow and tubercle may appear elsewhere. Martin also says that in cases of effusion, if tuberculous, pyrexia is apt to be prolonged, lasting for weeks or months without suppuration. In such cases effusion may be large and persistent, returning again and again till the patience of the operator is exhausted. The sac is so dense of wall that neither can the lung expand nor the walls absorb; the earlier taps are often more copious than the later. To the little short, unmeaning dry coughs I have already alluded. Latent pleurisies, again, Martin regards, and rightly, as generally tuberculous, unless, of course, they belong to malignant disease or other such different series; but a fully acute fibrinous exudation is quite consistent with a tuberculous cause. We know that pleurisies may be latent for another reason than stealthiness of symptoms; in pulmonary phthisis pleuritic inflammations are frequent and recurrent; but, although not rarely somewhat painful, they are apt to be merged in the predominance of the main malady, as sometimes also that far more mortal incident, meningitis. Pneumothorax also is indicative enough of tubercle, but again rather of the lung than directly of the pleura. Inequality of the pupils is more of a curiosity than a guide; but as it pertains rather to parietal pleurisies of the upper lung it is so far on the side of tubercle.

[1] Landouzy: Revue de Médecine, tome vi., 1886.
[2] Kelsch et Vaillard: Archives de Physiologie normale et pathologique, Août, 1886.
[3] Brit. Med. Jour., 1890.
[4] Medical News, 1889.
[5] S. Martin: THE LANCET, March 3rd, 1906, p. 586.

FREQUENCY OF TUBERCLE AS A CAUSE OF "IDIOPATHIC" PLEURISY.

It is obviously, then, of the greatest importance to know, if the knowledge can be compassed, whether a given case of pleurisy be tuberculous or not. What are the probabilities as derived from such calculations as we have? If we are not ready to accept the rather facile estimate of the French school, have we any stricter reckonings to rely upon? Ehrlich in 42 cases of pleurisy found that 9 were definitely ascertained to be tuberculous. Stintzing, of Jena,[6] on a careful survey of 156 cases in persons over five years of age, proved that 57 were certainly tuberculous; 36 were probably of this nature, an estimate less ominous than in current French opinion. Eichhorst selected 23 cases of acute serous pleurisy in persons otherwise apparently in good health, and presenting no sign of tubercle in the body elsewhere, or history of this liability in the family histories; yet in 15 of these (62·2 per cent.) intraperitoneal inoculation into guinea-pigs was positive. Aschoff,[7] who made some similar experiments, obtained evidence of tubercle in 9 out of 12. Netter's well-known researches, published in his "Treatise on Medicine" (1893), led to a similar conclusion. Massing together cases of all ages he found 25 per cent. to be tuberculous; but in children of course pleurisy is more frequently due to other infections, such as the pneumococcal, than to tubercle. Some years ago Sir William Osler positively determined 32 cases out of 101 to be tuberculous.[8] But in some at least of these observations on pleuritic exudate no account was taken of the resistance of the pleural defences in primary pleurisy, as compared with the weak defence in secondary (phthisical) pleurisy. In many cases of primary pleurisy the pleuritic exudate is germicidal and active enough to destroy the tubercle bacilli, or at least to overwhelm and carry them or modify them beyond our means of detection. Again, the fibrin and new membranes involve and hide these microbes; indeed, on tapping the fibrin carries them down mechanically, often away from discovery; so that in not a few cases of primary pleurisy the evidence of tubercle may be hard to catch.

But before passing on to the bacteriological tests there is still more to be said on the clinical side. Landry and Adami[9] have provided us with perhaps the largest group of observations on this subject yet recorded—namely, 1374 consecutive necropsies at the Royal Victoria Hospital, Montreal. These necropsies were all carried out, from the present point of view, under the inspection of Professor Adami, and all points noted so far as visible to the naked eye. In not a few cases microscopic and other tests were used, but on the whole the research was on the ordinary methods of morbid anatomy. Adhesions on one or other side were classified as (1) general; (2) scattered; (3) apex free, but occasional adhesions below and in front; (4) tight adhesions; (5) separable on slight traction. In more than 70 per cent. the adhesions indicated a pleurisy of some degree; in 40·6 per cent. tubercle, or its remnants, was definitely perceptible in the thoracic cavity; in 45·5 per cent. it was perceptible in some part of the body. The authors were disposed to regard apex adhesions as evidence of tubercle, and when these cases were added to the 45·5 per cent. the percentage rose to 52. Cases of miliary tubercle were excluded. But in 26·8 per cent. of cases definitely tuberculous there were no pleural adhesions, and 21 per cent. of these were thoracic; therefore not all thoracic tubercle implies pleural adhesion; but these were for the most part cases of limited and obsolete degrees. On the same occasion Dr. McCrae read a similar paper on a large number of cases, and the results were much the same as Adami's; but McCrae emphasised the converse result that of all bodies examined only 50 per cent. of the cases presented direct evidence of tubercle, suggesting that only half of pleurisies might be tuberculous.

On the other hand McCrae noted that about 25 per cent. of tubercle in the thorax comes short of pleuritic adhesion; but on the whole both Adami and McCrae found something like a direct relation between extent of adhesion and amount of tubercle detected. Much of this tuberculous adhesion

[6] Stintzing: Correspondenzblatt für Schweizer Aerzte, 1895, quoted in medical journals about that date.
[7] Aschoff: Zeitschrift für Klinische Medizin, 1896.
[8] Boston Medical and Surgical Journal, 1893.
[9] Landry and Adami: Montreal Medical Journal, vol. xxxviii., April, 1909.

seems to be latent. Sir William Osler thinks that only about 2 per cent. of adhesion is diagnosed as such during life; as a rule, he says, "if no effusion no diagnosis." The upshot of Landry and Adami's paper is that serous pleurisy is most often tuberculous; the non-tuberculous, however, forming a substantial minority. At Würzburg, however, the calculation was that but 3·4 per cent. were non-tuberculous; at the Charité (Berlin) 9 per cent. were regarded as certainly not tuberculous, which estimate comes nearer to the figures of Le Damany, and of Widal and Ravaut. Sir William Osler's estimate, as I have said, based on necropsies, was 32 tuberculous out of a total of 101.[10] These conclusions differ rather widely.

Dr. G. A. Gibson,[11] in an address, has stated that of 118 cases of pleurisy 35 (29·7 per cent.) were clearly tuberculous, which is near Osler's estimate; 49 (41·5 per cent.) were as clearly not tuberculous; in 34 the causes were unknown; some of these may have been tuberculous. In some bodies a recent pleurisy presenting no tuberculous features was coincident with old tubercle, but not apparently dependent upon it—cases, for instance, of uræmia, sepsis, and the like; in others death from tuberculosis ensued so long after a pleurisy that it was impossible to connect the two events, for other causes for the pleurisy might well have interfered. These figures of Dr. Gibson have been said to underrate tubercle as a cause of pleurisy; for my part his computation agrees with my own impressions, and certainly for its careful and impartial estimate of the complex conditions at work deserves respect. The prevalence of tubercle is such that in a certain number of instances it must coincide with pleurisy due to other causes.

A few years later we received the results, now well known, of the Swedish physicians Allard and Köster.[12] The two series were compiled on the same principles, but independently of each other. Allard's series dealt with 200 cases of idiopathic pleurisy—180 serous, 20 dry—treated in Gothenburg from 1881 to 1893; their subsequent fate having been investigated in 1910. Köster's series dealt with 371 such cases—334 serous, 37 dry. Now in Allard's series, 16 to 28 years later 87 patients were found alive and well, 28 were tuberculous, 61 had died of tuberculosis, and 24 had died of other diseases. In Köster's series, 2 to 16 years later 164 patients were alive and well, 118 were tuberculous, 62 had died of tuberculosis, and 27 had died of other diseases. Furthermore, 2123 cases of pulmonary tuberculosis were analysed by them, and in 650 of these there was a history of idiopathic pleurisy. Combining, then, the two series the writers found that idiopathic pleurisy was followed sooner or later by pulmonary tuberculosis in 47·7 per cent., and that in the case of dry pleurisy this percentage was as high as 42. Van Ruck,[13] of 1000 cases of pulmonary phthisis, found a history of previous pleurisy in 40. Dr. W. C. Bosanquet's own cases, 1200 in number, showed previous pleurisy in 5 per cent.; and in 4 per cent. more pleurisy proceeding directly to phthisis. For life assurance of persons with such a history he proposed two years' probation, or an increased rate, or the alternative of five years' probation for an ordinary rate.

The prognosis after "idiopathic" pleurisy is much brighter in early than in middle life; thus while the subsequent incidence of tuberculosis is only 30 per cent. when the pleurisy has occurred between the ages of 6 and 10 years, between the ages of 31 and 35 it is as high as 60·4 per cent. Even at the high age of 66–70 idiopathic pleurisy seems to be followed by tuberculosis in about 40 per cent. of all cases; and, as a rule, in the adult this sequence is more acute and mortal than in the child. In 85 per cent. tuberculosis flared up within five years of the pleurisy, but up to the age of 15 the progress of the tuberculosis is slower, and it flares up more after than before a lapse of five years. There was not a single case in either series of dry pleurisy in childhood, a point to which I shall return. The occurrence of tuberculosis, subsequent to pleurisy, arising out of other infectious diseases is very rare, so that such a patient returns after complete convalescence to the category of a first-class life, whereas for five years after idiopathic pleurisy he is hardly insurable; indeed even after this interval his chances of tuberculosis are not inconsiderable. These more recent estimates are in contradiction to the older rules of Pollock and Chisholm,[14] who write that after convalescence from such attacks the life is acceptable at ordinary rates; and that even a contracted side from absorption, with slight dulness and diminished breath sounds, need not invalidate the life. To this point of prognosis also I shall return. Dr. E. Reginald Thompson did not decline cases of past serous pleurisy, after tapping and recovery, at ordinary rates, if family and personal history were favourable; but "he looked askance at them," and he declined all empyemas, though these might well be pneumococcic, &c.

After these reckonings we shall not be surprised to find that Dr. Cecil Wall[15] at the beginning of classification divides ordinary pleurisy into the tuberculous and the non-tuberculous. From the figures which I have cited, and others which I have on my file, I think we may take it that of all "idiopathic" pleurisies in persons over, say, five years of age 50 per cent. are tuberculous. As regards child life, my own impression from experience is that pleurisy in young children is rarely tuberculous, I mean that the incidence may not be more than 1 in 10; and even of these the pleurisy may be only incidentally associated with a tuberculous focus, or the tubercle may be a secondary consequence of a protracted empyema. In children an empyema is usually pneumococcic, in adults streptococcic; and the pus contains the specific microbe. On the other hand, I have remarked, as others have done, that in elderly persons pleurisy is often tuberculous, although its manifestations may be slower. If the infection be not of the miliary form they do as well or as ill as younger persons.

Some Points in Diagnosis and Treatment.

The statement that a contracted side with slight dulness and diminished breath sounds need not invalidate the prospect of the life, brings us back to symptoms, and to the point of difference with the authors of "The Life Assurance Handbook," a book or edition, however, which it is fair to remember was published 20 years ago. But, speaking broadly, I should say that these cases of slow absorption with deformity are generally tuberculous. Absorption seems to be slower, often very much slower, in a tuberculous than in, say, a rheumatic pleural sac. In some of these cases, indeed, cases pretty surely tuberculous, absorption is at a standstill; and after every tapping the fluid perpetually reaccumulates in a most disheartening manner. Some very chronic and persistent forms of synovitic effusion are probably tuberculous. On this principle a method has been proposed for diagnosis of pleuritic tubercle—viz., by the rate of absorption from the cavity of methylene blue or other pigment; but the method is too fallacious to be of practical service. Eichhorst and others have tried this test carefully and found it wanting. Fowler and Godlee[16] seem to think that such effusions had better be left alone; but they add the qualification "unless large." When large the relief from tapping, transient as it is, can hardly be denied; and in face of the probable sequels of sepsis and collapsed lung, the weight of their caution is against incision. I have often had to warn a family physician against incision of a pleural sac in which, to his discomfiture, fluid has gathered again and again to seven times seven. Tapping does no harm in tuberculous cases. And there is another point; if adhesions can be brought about we may hope that thus any tubercle bacilli active in the sac may be so incarcerated as to be reduced to impotence. For this rather speculative reason I have never cordially entered into the views of those who would try to prevent adhesion by injections of paraffin and the like. Within limits adhesion seems to me, for the reason I have given, to be the best safeguard against tuberculous extension. For non-tuberculous effusions one tapping, and this, perhaps, a partial one, may suffice to set up absorption and cure; while, as Dr. Sidney Martin also observes,[17] tuberculous effusions are slower in recovery and much more prone to cause deformity of the chest and pulmonary retraction. I may add that, even in more manageable

[10] W. Osler: Boston Medical and Surgical Journal, 1893.
[11] Brit. Med. Jour., Jan. 7th, 1905.
[12] Allard and Köster: Paper originally published in Hygiea, Oct. 10th, 1911, and reported in many journals about that date, as, e.g., Epit. Brit. Med. Jour., Feb. 10th, 1912, from which I quote. See also Allard: Beiträge zur Klinik der Tuberkel, Band xvi., which paper I have consulted.
[13] Van Ruck, quoted Bosanquet, Clinical Journal, July 13th, 1910.
[14] Pollock and Chisholm: Medical Handbook of Life Assurance, 1889, I quote from the same Epitome.
[15] C. Wall: Clinical Journal.
[16] Fowler and Godlee: Diseases of Lungs, 1898. See also Godlee, Address, Surgical Section Royal Society of Medicine, Oct. 12th, 1909.
[17] Loc. cit.

cases, if the "idiopathic" pleurisy recurs tuberculosis is most probably present; and this inference is not weakened if a recurrence be on the other side, or if the interval be considerable, up to two or three years or more.

While speaking of these slow and persistent effusions I may refer to the cases of multiple inflammation of serous cavities described by certain Italian physicians, and in this country by Dr. Frederick Taylor, under such names as polyserositis, serositis chronica multiplex, or polyorrhomenitis; in nature these are often, but not always, tuberculous. The same may be said of chronic adhesive mediastinitis. There is no inconsiderable weight of opinion that even the ascites associated with cirrhosis of the liver, whether alcoholic or not, is often due, in part at any rate, to the coöperation of tubercle.[18] I have on my file a good illustrative case of this kind published by Dr. G. J. Conford, of Felixstowe.[19] I give a very brief extract from the notes.

In a woman, aged 46, a pericardial friction was followed by pleurisy over the lower lobe of the right lung. Fifty-two ounces of fluid were drawn off. Rapid refillings called for three large tappings during the following three weeks. During the next three weeks four such tappings were needed and had to be repeated from time to time later. Against the presumption of tubercle were the slight degrees of emaciation and debility, and negative von Pirquet and diazo reactions. Death followed in 12 months. Necropsy: Tuberculous peritonitis dry and adhesive; thick omentum; large pale fatty liver; pericardial adhesions; nodules of tubercle in one lung, and tuberculous pleurisy. Here very wisely—if I may say so—no incision was made into the pleura. Dr. W. P. Herringham[20] has published a similar case. I need not dwell on the teaching of such cases as these. Dr. William Ewart,[21] in an illustration of his study of the "oval patch" in diagnosis, records a case of tuberculous peritonitis (verified by operation) in which by this percussive method pleural adhesions at the left apex were determined.

I should be interested to know if Dr. Ewart, and clinicians skilled as he is in percussion, can discern the presence of an interlobular pleuritis—tuberculous or other. I think I have demonstrated this area in a few cases of this seat of empyema, yet not perhaps till purulent expectoration had put me on the track of it. But in this cleft a tuberculous pleurisy may occur, and occur mainly there. I have never diagnosed such a case; probably I am not skilful enough to do so. Still, if with a dry cough, and perhaps some vague pain, a strip of dulness were made out along this cleft in the scapular region, such a diagnosis would be justified. Sabourin[22] says that in this seat pleurisy in the tuberculous is too often overlooked; although putting together clinical and physical signs the prescient physician should find this state not too difficult of recognition. However, this problem, and many another I fear, I must leave to your future experiences.

If some of these points seem to you to be rather academic, and some of the methods to be too refined for common work, let me impress again upon you the grave issues which depend upon them. Whether in a certain man a pleurisy be really tuberculous or not, may make all the difference in the forecast of his present prospects and of his future career. If this be so, the pathfinder cannot afford to disregard any sign, however slight or curious, which might add to the cumulative evidence of clinical and pathological research. We shall inquire, then, what assistance is to be had from expert bacteriological methods? Unfortunately, the exudate of unquestionably tuberculous pleurisy is rarely positive, whether to the microscope or to culture, and in cytology it is usually equivocal. We have seen that in ordinary serous pleurisy the fluid exudate is strongly defensive and bactericidal, so that in it bacteria are liable at least to sharp check,[23] if not to destruction. If only checked, although undiscoverable by the microscope, intraperitoneal injections into guinea-pigs might prove positive. Chemical tests, says Dr. Gulland, are as yet useless.

[18] In England, Pitt and Moore. In France, Triboulet, Jousset (Société Médicale des Hôpitaux, 1903), and Tripier in his Traité d'Anatomie Pathologique. See interesting paper by Roque and Cordier in the current number of the Revue de Médecine (Oct. 10th, 1912).
[19] Conford: Brit. Med. Jour., April 27th, 1912.
[20] W. P. Herringham: Clinical Journal, July 4th, 1906.
[21] W. Ewart: Brit. Med. Jour., Oct. 12th, 1912.
[22] Sabourin: Les Epanchements Interlobaires des Tuberculeux, Archives Générales de Médecine, January, 1909.
[23] See Gulland: Brit. Med. Jour., May 24th, 1902.

MORPHOLOGY OF EXUDATE.

Let us consider first the morphology of the exudate, then its bacteriology, and afterwards the morphology of the blood. We shall not be misled by the appearance of a few red cells in the exudate so as to forget that these often escape into it even from punctures which seem to be bloodless, and must not therefore without precaution be regarded as suggestive of grave disease. Indeed, from an acute attack of pleurisy I have often seen red cells in the exudate which to the best of my observation did not come from the wound, and certainly were not due to malignant disease. If the reds exceed 5000 per cubic millimetre the effusion is regarded as hæmorrhagic. Next, as to lymphocytes: we cannot unfortunately accept in pleurisy, as Widal and Ravaut[24] would have us accept, any canon in respect of the significance of these cells in a diagnosis of tubercle. We may, it is true, suspect tubercle, and strongly suspect it, in a case in which at an early stage they exhibit a predominance; but these cells may predominate, even abundantly, in rheumatic cases. The pleuritic fluid of Bright's disease also is said to be lymphocytic. These lymph cavities presumably are disposed to lymphoid exudation unless toxic or bacterial invasion calls forth the polynuclears. Dr. Gibson[25] again agrees that no reliance can be placed upon these lymphatic constituents in deciding upon a tuberculosis of the pleura; at first, he says, the cell content largely consists of lymph cells; or a few polynuclears may be seen, due to a transient streptococcic impurity. Of course, if these microbes gain the upper hand an empyema will supervene, and polynuclears will abound. Of 6 empyemas, Gibson found only 1 tuberculous. In a secondary pleurisy, due to an outburst of subpleural tubercle, the cell picture is, of course, various. Dr. T. J. Horder[26] seems to trust rather more than I should do to the lymphocytic signs, but he does not say whether he is trusting to his own observations or to the statements of others. Sahli, in the fifth edition (1909) of his "Clinical Methods,"[27] agrees that the test of lymphatic cell exudations cannot be trusted. Many exudations, he says, wholly lymphatic in their morphology, are not tuberculous; and not rarely in an early tapping of a tuberculous pleurisy the polynuclears predominate over the lymphocytes, or, at any rate, appear in equal numbers. Furthermore, in his experience a lymphocytic picture has often appeared in exudates not tuberculous. He thinks, however, we may go so far as to anticipate that such a picture may signify a milder degree of the malady. His compatriot Eichhorst is of the same opinion. Lommel, if I may judge from a summary of his paper, appears to me to underrate the fallacies of cell counts in pleurisy.[28] I think for the present we are obliged to presume that in pleural exudation a lymphocytosis so often depends on something other than the specific nature of the inflammation, on the rate of it perhaps, or on the degree of its virulence, that we cannot rely upon the cytological test.

Epithelial cells, or "placards" of them, have no specific meaning, and may be freely shed in hydrothorax, or in carcinoma; few observers have claimed any diagnostic value for them. Indeed, the strong tendency to false membrane in tuberculous pleurisy serves to arrest these detachments.

BACTERIOLOGY OF EXUDATE.

But may we not expect more from a search for the tubercle bacillus? Here again I fear we shall meet with some disappointment; in this matter, however, I am practically dependent upon the reports of others. If sputum be obtained, of course the bacillus may be found in it; but in these instances we are probably dealing with a secondary pleurisy, secondary to pulmonary tubercle; and the pleurisy may be of limited extent, and comparatively unimportant. When we turn to serous pleurisies, and it is chiefly in these that our difficulties of judgment arise, we find that even in cases of undoubted tuberculous pleurisy the exudate is often apparently, or indeed really, sterile.

Let us first consider the results of direct examination of the exudate by microscope or by culture. Dr. Sidney Martin, while not saying that the tubercle bacillus is always absent in exudates undoubtedly tuberculous, says conversely

[24] Widal and Ravaut: Comptes Rendus de Société de Biologie, 1900.
[25] Gibson: Brit. Med. Jour., January, 1906.
[26] T. J. Horder: Clinical Pathology, 1910, p. 74.
[27] Vol. ii., p. 913.
[28] Lommel: Medizinische Klinik, No. 4, Jahrgang v., quoted Epit. Brit. Med. Jour., March, 1909.

that if tubercle bacilli (and other bacteria) are absent from cultivation of the spun deposit from 100 c.c., if, i.e., it be sterile on ordinary media, the presumption is for the tuberculous nature of the case. But he goes on to say, notwithstanding, that by special precautions the specific microbe may often be discovered. And in this way; 100–200 c.c. are to be carefully and sufficiently spun: in the lowest layer red cells from the puncture may be found; above this layer is one, often of a whitish or creamy colour, consisting of pus with perhaps some endothelial cells; in this layer a few tubercle bacilli may be detected. The method of Jousset,[29] who is very confident about its success, is to withdraw a few ounces of the exudate and allow it to clot; the clot carries down the foreign bodies. This clot is then to be digested with an artificial gastric juice, which dissolves fibrinous clot but not acid-fast bacteria. Then spin, and put a little of the sediment under cover-glass, and stain. By this method Jousset says that in a tuberculous case tubercle may surely be revealed, with the small mononuclears which accompany it. Jousset's method has been put to the proof by many observers, but without confirmation in the degree which he claims for it. Sir William Osler thinks that the bacilli may be detected in about 30 per cent. of tuberculous cases, but Eichhorst computes recognition at 62 per cent. Out of 16 cases proved to be tuberculous Netter[30] found the bacilli in 8. Ehrlich, on the contrary, in his 42 cases found tubercle bacilli in 2 only; other observers have found them in none,[31] a remarkable contrast with the constancy of discovery in the fluid of meningitis, but this fluid is far less bactericidal.[32]

One point of precaution certainly seems to be that a sufficiently copious quantity of the effusion shall be taken; the more the fluid examined the more the chance of catching a few of the invaders. The very discrepant estimates of the proportion of cases in which the bacilli are discoverable suggest that a good deal depends upon the adequacy and precision of the method pursued. I need scarcely say that when a pleurisy has become an empyema tubercle bacilli are rarely, although occasionally, to be detected; and perhaps only in case of direct communication with the infected lung, gland, or bone. As a rule, empyemas of tuberculous origin close up well enough; but if, in such a case as I have alluded to, a sinus persists tubercle bacilli may find their way into this channel. To the microscope, then, tuberculous exudations are often sterile, so that from their behaviour we cannot as yet obtain the criterion we need, although this very sterility may itself have an ominous meaning. These perpetually recurrent effusions, which we have taken to be practically all tuberculous, are nearly always sterile. Gibson reminds us that in some cases the bacilli may be found in the urine.

If in our direct examining of the effusion we are thus disconcerted, have we any better hopes of an answer from animal tests? The guinea-pig test does no doubt give a better result, yet it is by no means infallible. Frequently the effusion in these cases is not only to microscopic and cultural tests apparently sterile, but often is really sterile. The tubercle bacilli, being incarcerated in the new membranes, or otherwise engaged, do not find their way into it. Another difficulty, so far as immediate diagnosis is concerned, is that the ordeal by the animal cannot be completed for three or four weeks, and when to this delay we add that when obtained it cannot prove a negative, we must admit that even in animal tests we have not secured the criterion of which we are in search. Le Damany no doubt claimed for animal tests a high, if not a full, value in this respect, but his rather extreme claims have not been corroborated by other investigators. However, Aschoff states that of his animals inoculated from all serous pleurisies 68 per cent. gave positive results, and if this is below Damany's estimate it is grave enough to justify Dr. Cecil Wall's division of pleurisies into the tuberculous and non-tuberculous.

[29] Jousset: La Grèce Médicale, Jan. 13th, 1903, quoted in other journals.

[30] Loc. cit.

[31] See Fränkel: Charité Annalen, Band xiii.; and Levy: Archiv für Experimentelle Pathologie und Pharmakologie, Band xxxvii., 1890.

[32] See Hemingway: The Constant Presence of Tubercle Bacilli in the Cerebro-spinal Fluid of Tuberculous Meningitis (156 Cases Positive out of 158), Archives of Pediatry, New York, 1911. The complex protein bodies which constitute the army of defence cannot, it seems, penetrate into this fluid.

Tuberculin Test and Blood Count.

But what about the tuberculin test? Well, there is here, as elsewhere, the old difficulty of discerning its message. Every year makes it clearer to us that, such is the resisting power of man, the prevalence in him of deposits of tubercle, more or less held in check, or obsolescent, is very large, and perfectly compatible with a non-tuberculous pleurisy. Eichhorst says that many of his cases of pleurisy when tested with tuberculin gave a positive reaction, to the exudates of which, however, guinea-pigs were negative, cases negative also in other respects. In some of them responsive foci were found in other parts of the body, and not in the pleura. In some, indeed, the curious result appeared that such obsolescent but reactive foci were found in the lung, the pleurisy notwithstanding being non-tuberculous. Moreover, during the pyrexia of a pleurisy it may be impossible to distinguish a reaction due to the tuberculin. On the reaction of the blood to tuberculin Sahli says[33] that while in this respect leucocytosis is handier for guidance in treatment by tuberculin than opsonins, yet a plus of lymphocytes or eosinophiles taken alone is no sure test for tuberculosis. It seems then that a blood count cannot take us far (Ehrlich, Widal, Quincke, Fränkel, Gulland). Reckoned with other points, a plus of polynuclears would suggest the influence of some pyogenic germs, as, for instance, in pleurisies secondary to lung disease, or with a deviation to empyema, though Gulland and Goodall[34] consider that "the absence of any increase of polymorphs, which accompanies inflammations of the serous membranes due to most other causes, is an important diagnostic point."

Route of Invasion of Pleura.

Having now learned how large a proportion of pleurisies are tuberculous in nature, and having discussed, with a necessary brevity, the means of sifting out tuberculous pleurisies, we may proceed with like brevity to ask ourselves how the tubercle reaches this rather secluded area. We speak colloquially of "primary tuberculous pleurisy," but we are well aware that we use the word "primary" in an equivocal sense. By primary we mean that the first conspicuous brunt of it falls upon the pleura, that the pleurisy is not an episode in a pulmonary tuberculosis. We are agreed that these pleurisies very often occur without any pulmonary disease, or at any rate without any that is discoverable. How, then, does the tuberculous infection reach the pleura? If from some other focus tubercle bacilli are liberated into the blood stream we should expect, as, indeed, we find, the result to be a diffusion of the infection far beyond the sphere of any one organ or part, and a far more extensive and virulent attack upon the system. A tuberculous pleurisy is usually not a very virulent form of this infection, and, although it may be followed sooner or later by tuberculosis elsewhere, by pulmonary tuberculosis, for instance, we are by no means sure that such later manifestations are, as a rule, direct consequences of the foregoing pleuritic condition. They may derive, perhaps usually do derive, from some other source, from the source it may be whence the pleura itself took its infection. More than one series of events may owe their origin to some old and long latent deposit which either had lain dormant, or had distilled into the channels of the body only such gradual quantities of poison as its defences were able to neutralise as they arose.

Somehow, then, it is no uncommon thing for tubercle bacilli from somewhither to drift into the pleural area without setting up a general tuberculosis; and as these great serous cavities are in close association with the lymphatic system we are disposed to look to this system for the source or channel of the infection. We should not anticipate, however, that these germs would travel without injury to the parts traversed, though such injuries might come short of clinical effect; if contiguous to the pleura they might work silently inwards towards it. Weigert,[35] in his many necropsies, was impressed long ago by the frequency of small foci of tubercle in the lungs in cases of pleurisy apparently primary; still, he does not press this point, and supposes, with other pathologists, that there may be other routes of access to the pleura more open to the traffic. It is impossible in any necropsy

[33] Sahli, vol. ii., p. 913, fifth edition, 1909.

[34] Gulland and Goodall: The Blood, 1912.

[35] Weigert: Die Wege des Tuberkelgiftes zu der serösen Häuten, Deutsche Medicinische Wochenschrift, 1883.

to assert that the lungs are certainly free from any contamination, but it is no infrequent experience in tuberculous pleurisy to find them to all appearance free. On Hirschfeld's records, it is true, we perceive that pulmonary foci may be as secret as they may be destructive; but at first sight the connexion of foci in the inner apex with the pleura is not obvious, the lymphatic meshes are not directly connected; moreover, a previous serous pleurisy and a subsequent pulmonary phthisis often are—indeed, generally—separated from each other by considerable intervals. However, a tuberculous pleurisy, confined to the cavity and affecting the system very gradually, may set up a protective reaction of some endurance.

If now we return to the anticipation that the lymphatic connexions of the pleura may indicate that its more open communications would be by these routes, from which direction may we look for them—by the neck, by the thorax, by the abdomen, by the pelvis, or by any combination of these? We may consider the pelvis first because, by our ignorance or by our facts, it may be soonest dismissed. About propagation to the pleura from the pelvis I find very little recorded, and my own experience is not more suggestive. Of the innumerable instances of pelvic tubercle which come before us, especially in the genital organs, I recall few, if any, which were followed by an "idiopathic" pleurisy. Tubercle of the pelvis seems to engender, if any such sequel, a peritonitis; and it is true, no doubt, that now and then such a chronic peritonitis may track up into the pleuritic cavity. The cases, or some of them, which we have considered as "polyserositis" may have thus arisen. But pelvic infection does not seem so far to be a frequent source of acute serous pleurisy. As regards the abdomen, it is true that an affection of the peritoneum may track up to the pleura more readily than from the pleura in a contrary direction; still, upon our only too large experience of tuberculous peritonitis, I think we shall agree that a sequence of serous pleurisy on such a peritonitis is far from common. Some basic adhesions may follow, or a polyserositis, but rarely an ordinary attack of acute pleurisy. This malady must, as a rule, be accounted for otherwise. There seems to be some sympathy between the supra-clavicular glands and the abdomen, and in a case of serous pleurisy, in which these glands were affected, an abdominal origin might be suspected.

THORACIC AND CERVICAL GLANDS AS SOURCES OF INFECTION.

Are its sources to be found in the thoracic or cervical systems of glands and passages? The bronchial glands, or one of them, when tuberculous, may of course propagate the infection directly to the pleura by contiguity; but this is, I think, an exceptional occurrence, and one which, if it occurs, would light up, not a general inflammation of the cavity, but rather some more circumscribed process. The bronchial glands are certainly in connexion with the pleural membranes, but the current of the lymph is contrary, it flows from them to the glands. How far this direction of the current is a bar to transference of particles in the reverse way we shall have to consider. The cervical glands are not apparently connected with the pleura, or so it has been usually understood, but with the upper respiratory and alimentary passages; yet recent experiments seem to indicate that these glands have some connexion with the pleura, and especially with the costal part of it. I have failed to find in the ordinary text-books any estimate of the degree in which the costal and the visceral pleura are respectively concerned in the lighting up of a serous pleurisy; but certain experiments seem to indicate that not all adhesions of the dome of the pleura are due to pulmonary irritations, but that they may occasionally be propagated directly from the cervical glands. I offer no references on this point, for it is one to which, as I shall show, sufficiently conclusive evidence is not yet in our hands. One point does seem clear—namely, that no direct communication exists between the cervical and the bronchial glands; if the pleura be infected from the cervical glands this propagation is direct, the bronchial glands are no half-way house. Whether the one or the other set of glands be the source of infection, the transference is direct; and from one or other of these lymphatic systems may arise those other pleural adhesions which are among the commonest phenomena of post-mortem experience, adhesions which often, of course, may not be of tuberculous origin. Dr. Wall has published two cases[36] of much interest in this respect; in one of them the cervical and bronchial glands were tuberculous; the specimen, now in the museum of the London Hospital, shows the disease spreading along the lymphatics and causing pleuritic adhesion, but not an exudative pleurisy. The lungs were free. Above the first rib, of course, the pleura is in close relation with the posterior triangle of the neck. The second specimen shows a miliary tuberculosis spreading along the subpleural lymphatics from a caseous bronchial gland. In the same museum is another specimen which shows carcinoma cells spreading from a secondary carcinomatous gland at the root of the lung along the subpleural lymphatics. Aufrecht suggests that embolisms into the lung from one or other of these diseased glands might set up a pleurisy, embolisms so minute as not to cause pulmonary symptoms; and he contributes an illustrative case[37] in which a particle detached from a tuberculous cervical gland was carried into the middle lobe of the lung of the side, with the symptoms of pain and dulness and pleurisy, and a little effusion. Such were the conditions revealed at the necropsy. Such circumscribed pleurisies are of course frequent in pulmonary embolisms, and the case is a curious one; but it would be rather fantastic to suppose such a mechanism to be concerned in ordinary serous pleurisies. On the other hand, the rule that these pleurisies commonly stand alone, not, that is, in association with tuberculosis of other cavities or organs, suggests that the cause is not a pervasive toxin or a katabolic vice, but a direct access of bacilli, whether through open stomata or coursing through the subendothelial connective tissue.

To ascertain the conditions or existence of such passages many experiments have been made, particularly by the injection of tinted particles, such as Indian ink. Crude as some of them seem to have been, injections from various directions seem at least to have proved that such particles reappear as knots just under the pleuritic endothelium, as tuberculous nodules may appear. It seems also proved that although in health the lymphatic meshes of the lung and pleura are independent, in disease more or less lymphatic access between the lung and pleura comes about, and that such particles can travel to the pleura even by way of new membranes. In cases of pleurisy in which tubercle exists in the lung, however latent, such a mode of transmission may be accepted, a transference not exclusively by rupture or direct contiguity.[38]

PORTAL OF ENTRY OF GERMS.

It is a common opinion that tuberculosis reaches the pleura by way of the cervical glands, and that these receive infection from the throat, especially from the tonsils. I have touched on the difficulty that for particles to travel this way would be to travel against the stream. The tubercle bacillus has, of course, no power of locomotion, and meanwhile has the leucocytes and local irritations against it. This difficulty, in the presence of well-known cognate facts of pathology, is less than its seems; we have innumerable instances of such apparent swimming against the stream in carcinoma, and so forth. The lumbar glands may become affected from a gastric cancer; or an inflammatory arrest may turn a current backwards, for instance, instead of flowing from the supraclavicular glands to the pleura it may follow the reverse direction. Such backward or cross currents have been demonstrated again and again, as we may see as long ago as in von Recklinghausen's Handbook. If other evidence seems to point to the cervical glands, the obstacle of current need not stop the explanation. Of course we know that in the large majority of cases of ordinary pleurisy the cervical glands are to all appearance intact, as also the bronchial glands may prove to be; but this is no argument against their association in the causes, for disease of a gland, so far from facilitating the passage of foreign bodies, in the degree of its block prevents it. What these considerations do suggest is that the bacilli, instead of being taken from a reservoir in the cervical glands, may pass from the outer air through them down to the pleura. It is asserted, on rather doubtful evidence it is true, that the bacilli may traverse the tonsil without any solution

[36] Wall: Clinical Journal, Oct. 9th, 1912.
[37] Aufrecht, Berliner Klinische Wochenschrift, 1911.
[38] Vide Fleiner: Resorption korp. Elem. durch Lungen und Pleura, Virchow's Archiv, 1888.

of surface. How far the tonsil may allow the entrance of tubercle bacilli without breach of its own surface is a problem still under discussion. Virchow was perhaps the first to suggest this entrance of tubercle by the tonsil, but he thought it an exceptional occurrence, and that the tonsil acted as a janitor or picket against such intruders. Either Virchow underrated the facility of entrance by the tonsil, or later observers have overrated it. That in some degree the tonsillary adit is overrated is unquestionable; these organs, although often detected as tuberculous, yet in the majority of cases suffer thus not by attack from outward bacilli but by infection from tuberculous lungs, that is by the sputum; as does the larynx. Such secondary tuberculosis of the tonsil is not infrequent, but primary tuberculosis of this member is rare; according to Maclachlan, of Pittsburg,[39] 1·4 per cent. of all cases examined. Also in the greater number of cases of cervical gland tubercle lesion of the tonsil is rare; or so it is said on high authority, by Sir Watson Cheyne, for instance[40]; though, on the other hand, Dr. Hugh Walsham, whose experience is very large, sets the incidence of tonsillar association much higher. I believe that Dr. Walsham thinks that Sir Watson Cheyne's opinion rests too exclusively on clinical experience unverified by minute histological research.

But is the tonsil the sole gate of entry of such infections from the mouth or nose? Infections from the throat, diphtheria, scarlet fever, &c., whether tonsillar or otherwise, are not uncommon, but they usually affect, if the pleura at all, both pleuræ, if not the mediastinum also; as *primâ facie* we might expect. In slower or more unilateral cases the chains of affected cervical glands, in passing from the neck through the clavicular aperture of the thorax, come down near the vault of the pleura. When one tonsil is affected we look for a pleurisy, if any, to be on the same side of the body. Maclachlan says, in one clause of his summary, that the tonsil is by no means the only portal of entry of infection by the mouth; infection, he says, may likewise enter through the mucous ducts surrounding the tonsils, as well as through the other lymphoid structures constituting the lymphoid ring of the pharynx. Professor Woodhead tells me he is of the same opinion. It has been stated by many observers that swabs from the oro-nasal passages even of normal persons often affect the guinea-pig with tubercle, even up to 30 per cent.,[41] assertions so grave and important as to call for more attention and verification. Eichhorst says that in his experience ordinary acute tuberculous pleurisy is more often associated with infective foci in some gland or other than with pulmonary tubercle.

I have referred to the experiments made by injection of tinted particles to track out routes from the tonsils or throat to the cervical or other glands. It seems very difficult in the usual laboratory animals to hit off the tonsil precisely, and it is generally felt that Grober's results, which were positive enough, were too few in number, and, moreover, not free from fallacy.[42] They came to this: that if plenty of Indian ink or carmine be injected at random into the tissues of the pharynx considerable quantities of it reappear in the cervical glands, in the subpleural meshes, thoracic glands, and mediastinum. Those not enclosed in leucocytes were evidently carried inwards by the current of juices, whatsoever the normal direction of the stream may have been. However, these, and similar experiments, have been closely criticised and repeated by Beitzke.[43] The article is a very cautious and thorough one, with a well-digested series of clinical and pathological facts. Beitzke[44] feels assured that the glands are bacteria-tight so long as normal in structure (a "bacterien-dichte Filter"); but that they are always, and under all circumstances, to be trusted in this respect is to assert a good deal, and more than the author can really know. Still, he seems to prove that coloured particles from the pharynx may reach the dome of the pleura without passing through the cervical glands. It is, of course, difficult or impossible to say where solution of epithelial defence begins and ends. At a meeting of our Cambridge Medical Society last month Mr. W. H. Bowen and Dr. G. S. Graham-Smith exhibited to us some beautiful specimens of diphtheria bacilli lying in the innermost crypts of a tonsil not coarsely diseased, if at all; and both von Behring and Professor G. Sims Woodhead in their feeding experiments showed the bacilli embedded in the tissues of the tongue, in the cervical glands, and so on—a very suggestive state of things, to say the least of it.

However, it is true that the evidence of traffic in bacteria between the oro-nasal tracts, the cervical glands, and the thoracic organs is by no means clear or unquestionable. What other line of explanation is possible? Some pathologists think that the bacillus, in ordinary tuberculous serous pleurisy, is carried thither by the blood. Well, we know that certain bacteria prefer to travel by the blood-vessels, but unless it be by some gross breach of continuity the bacillus tuberculosis prefers to travel by the lymphatics. Furthermore, this kind of pleurisy is a very characteristic and very uniform malady; it is no mere accidental deposit of tubercle among many deposits, but usually stands alone; the lungs, the accessible glands, and other parts being to all appearance unconcerned. Moreover, as we have agreed, if it be followed by an outbreak of tubercle elsewhere, this is usually deferred for some considerable interval. If the bacillus be in the blood, ought we not to expect some simultaneous or early successive outbreak in other parts—in the other pleura, for instance, or in a joint? This unilateral pleurisy is so characteristic that it must have some peculiar kind of causation, more or less apart from tuberculous attacks elsewhere; or so it would seem. The precise mode of it we do not know.

PROGNOSIS.

If we know thus little of the manner in which tuberculous pleurisy is produced, do we know more of its consequences? On the importance of a patch of dry pleurisy in prognosis I have already dwelt at length. What is the prognosis of the acute serous form? Of the proclivity to later outbreaks of tuberculosis, especially pulmonary, we have spoken already. The glueing together of the serous surfaces tends to the stifling and obliteration of the bacilli, and it may be that a direct origin thence of later manifestations is not the rule; that, generally speaking, any later events are not so much the effects of the pleurisy as kindred processes. A subsequent phthisis may not begin on the same side. Of more direct consequences are the stubborn retractions, with deformity of the chest and fibrous invasion of the lung and bronchiectasis, which we know only too well, and recognise as belonging rather to the tuberculous than to other kinds of pleurisy. Meningitis is, in my experience, a very rare sequence; I do not remember a case, but Eichhorst has collected a number of them. More often we are disappointed to see these pleuritic cases drift into spinal or joint tubercle, or into tubercle of the urogenital parts. It seems that in most of these cases the bronchial glands are affected, and may form a link between the one and the other set of phenomena. Under the aseptic treatment now universal the tuberculous effusions show no great proneness to suppuration; if, unfortunately, this comes about, obstinate sinuses may be established with tendency to amyloid disease. I have almost given up repeated exploratory, or plastic, surgical interference with these fistulous conditions, operations which are usually futile or worse; I believe that these cases do better under sanatorium treatment. It is a matter for our consideration whether a patient on recovery from an acute serous pleurisy, which may have been tuberculous, should be submitted to vigilant sanatorium methods for some sufficient interval before entering again into his ordinary life.

[39] Publications of the Pittsburg Medical School, September, 1912.
[40] Watson Cheyne: Brit. Med. Jour., 1899, vol. ii., p. 1039.
[41] See Strauss: La Tuberculose et son bacille, Paris, 1895; and Freudenthal: Aetiologie der Lungentuberculose, Archiv für Laryngologie, Band iv., 1896.
[42] Grober: Deutsches Archiv für klinische Medizin, Band lxviii.; and Friedmann: Deutsche Medizinische Wochenschrift, 1900, and Ziegler's Beiträge, 1900.
[43] Beitzke: Virchow's Archiv, Band clxxxiv., 1906.
[44] Ueber den Weg der Tub.-baz. von dem Mund und der Rachenhöhle zu den Lungen, &c.

THE Senate of the University of London has communicated to the London Education Committee its proposal to establish among other chairs one of Zoology tenable at King's College, London. An appointment to this chair has been made dating back to the commencement of the session 1912–13. The salary attaching to the professorship is £600 per annum. Professor Arthur Dendy, F.R.S., who has been professor of zoology at King's College since 1905, was appointed to the new chair on the recommendation of the Board of Advisers, his previous salary thus being freed for application to other purposes.

Inaugural Address
ON
DRUNKENNESS AND THE PHYSIOLOGICAL EFFECT OF ALCOHOL.

Delivered before the Midland Medical Society

BY CHARLES MERCIER, M.D., F.R.C.P.

GENTLEMEN,—At the present time the medical world is being stirred by a new interest—an interest in the history of medicine—and therefore I make no apology for addressing you on the subject of drunkenness, although its importance is mainly historical. In other respects it is of fading and diminishing importance. We are told, in one of the most brilliant plays that ever was written, that damns have had their day; and however premature the assertion may have been with respect to damns, there is no gainsaying that, in this country at least, drunkenness has had its day. We are now a sober nation; and instances of the affection of which I am to treat to-night must be sought for mainly in history. It is true that we are still, upon rare occasions, called upon to treat a case of delirium tremens; and some of us still hear, from time to time, the once familiar phrases, 'Five shillings or seven days,' 'Forty shillings or a month,' but these formulæ are rapidly becoming obsolete.

It is true that if we listened to some of the advocates of total abstinence we should suppose that drunkenness was never so rampant or so prevalent as it is now; but these people have failed to move with the times. Their fulminations are out of date; they refer to a state of things that has long passed away. The antagonism to alcohol has fossilised into a superstition, and total abstinence is advocated for all and sundry, irrespective of whether they are temperate or not. For this reason it is losing, if indeed it have not already lost, its influence. For my part, I abominate intemperance; but I recognise that intemperance is not confined to indulgence in alcohol. There is intemperance in speech and in statement, as well as intemperance in drink; and while it is admitted on all hands that the craving for alcohol is sometimes irresistible and insurmountable by any effort, I find it difficult to believe that the craving for using exaggerated language about it might not be resisted and surmounted by the exercise of self-control. The drunkard is at any rate sometimes sober, but we have yet to wait for sobriety of language from some of the advocates of total abstinence. There comes into my mind a certain saying about compounding for the sins we are inclined to by damning those we have no mind to.

I do not say that the cult of total abstinence has never been of use, or that it may not now have its value in certain of our oversea possessions, to whose support we attach so much importance, and to whose opinions we attach a value that seems to me exaggerated. What I say is that the cult has lost its value and its importance here and now, for the same reason that leper hospitals and precautions against ague have lost their importance in this country at the present day: that is to say, because the conditions of their usefulness have ceased to exist.

ENGLAND IN PAST TIME A DRUNKEN NATION.

The time was when England really was a drunken nation; but that time was long before the memory of any one now living. The time was when there was no disgrace in being drunk—nay, it was the other way about. Drunkenness was the fashion, and he was disgraced in the eyes of his companions who went sober to bed. In my youth there was a convivial song, now long forgotten, and even then long obsolete, which represented very fairly the prevailing sentiment of a hundred years before. It ran thus:—

> He that drinks small beer and goes to bed sober,
> Will fall as the leaves do,
> Fall as the leaves do,
> Fall as the leaves do,
> And die in October.
>
> While he that drinks strong beer and goes to bed mellow,
> Lives as he ought to live,
> Lives as he ought to live,
> Lives as he ought to live,
> And dies a jolly fellow.

In the latter part of the eighteenth century, people sat down to dinner at 4 or 5 o'clock in the afternoon. Dinner was a stately and solemn ceremony, as needs must be when host and hostess carved for their guests, and were allowed after each course a quarter of an hour's law, to eat their own when the others had finished. After two or three hours, the cloth was removed, and the decanters went round in coasters on the polished mahogany. After a decent interval, the stories began to broaden, and the ladies retired, while the gentlemen settled down to the business of the evening. From that time until midnight, drinking went on; not rapid or furious drinking, but slow and steady absorption, as the decanters went round. From time to time the process was accelerated by the host calling upon one of his guests for a toast, or a sentiment, and then all were obliged to fill and empty their glasses. Nowadays, no one notices whether a health is actually drunk or not, but in those days the rule against heel-taps was rigorously enforced, and he who left any remainder in his glass was held to be wanting in respect and loyalty to the toast, and might very well have to answer for his negligence next morning in a duel. The fashion of the toast is still with us, but in a mitigated and attenuated form. We do not now toast the reigning beauty, and the rule against heel-taps is no longer enforced; and we are spared altogether the horrors of the sentiment. We are not now called upon after dinner to drink to 'the reflection of the moon on the calm bosom of the lake,' or to 'the man who would place king and country before life and wealth.' We should as soon think of toasting the man who broke the bank at Monte Carlo.

In the days I speak of, our forefathers did not dine by the light of the electric filament, or of incandescent mantles, for in the reign of George III. these conveniences had not yet been invented. They dined by candle light, and from time to time the servants came in to snuff the candles, and took the opportunity to loosen the cravats of those guests who had subsided under the table. At length the orgie came to an end, and the half drunken servants staggered in to carry their wholly drunken masters to bed.

In those days, the doctor was often half seas over when he attended his drunken patient; the parson was often drunk in the pulpit; judge, counsel, and attorneys pursued their avocations in court in a prevailing atmosphere of hot coppers. The Prime Minister went drunk to the House of Commons, where he was attacked by the leader of the Opposition, also drunk, while order was kept by a Speaker who was half seas over. There was no excise on spirits, and the coarser kinds of distilled liquors were ridiculously cheap. As you passed along the bye streets of London, and perhaps of other great cities, you might read the legend hung out over the drink cellars, 'Here you may get drunk for a penny; dead drunk and clean straw for twopence.'

THE NATION NOW A SOBER ONE.

Contrast that state of things with what exists now, and then will any teetotaller have the hardihood to maintain that drunkenness has increased, or is becoming worse, or is as bad as ever? Such assertions serve merely to expose the ignorance of those who make them. The fact is undeniable and indisputable, not only that we are much more sober than we were, but that the English—I say nothing about the Irish or the Scotch, because I do not know—the English are now a sober nation. It is very rare now to see any man above the rank of an artizan drunk, and the enormous majority of artizans, yes, and of day labourers, are sober men. It is futile, I had almost said fatuous, to go on repeating a parrot cry that was once applicable to a state of things that has long passed away. Unless we wilfully shut our eyes, or wilfully say the thing that is not, we are compelled to admit, with whatever reluctance, that the English are now a sober nation.

If we consider the altered conditions of life and of employment, we see that this must be so. The occupations by which men now earn their living require a skill, a nicety, a vigilance, an accuracy, an attention, which are incompatible with even occasional drunkenness. The horses of a stage coach could find their way to their accustomed destination, even though the driver was so drunk as to be incapable of directing them. Indeed, I have been told by an eye-witness that, in the early part of the last century, the London coach came safely into the inn-yard in Birmingham, although the driver was frozen to death on his box. But to-day the London express could scarcely be trusted to come safely into Snow Hill station if the engine driver were frozen to death, or even

if he were drunk. When we consider the enormous army of men that is employed on and about railways—on the footplate, in signal boxes, in the guard's van, and in other responsible positions—and remember that even a momentary lapse of vigilance might result in horrible disaster, we must acknowledge that, wherever drunkenness is to be found, it is not among railway servants. Whoever heard of an engine driver, a stoker, a signalman, or for the matter of that, any employee of a railway company, appearing in a police court on a charge of drunkenness? Accidents do unhappily occur to trains, and every such accident is inquired into with the utmost stringency by the Board of Trade, but who ever heard of a railway accident being attributed to the drunkenness of a railway man? Not one. And the railway men are but a sample. Machine work supersedes hand labour everywhere, and in almost everything; and the men who tend machines, whatever the nature of the machines, must be sober men, and are sober men. The penalty of drunkenness to the tender of a machine, and not only to him, but to his mates, is too terrible to be incurred. Positively, the only class of men concerned with machines who ever appear in the courts charged with drunkenness are the drivers of motor vehicles; and even of these, the proportion charged is almost infinitesimal. And we must remember that this is a new industry, an industry of enormously rapid growth, and can scarcely be expected to attain stability for a few years. Consider the enormous number and proportion of the population of this country that is daily concerned with the working of some kind of machinery, and consider that you rarely or never hear of one of them being accused of drunkenness, or even of losing his place for drunkenness, and you must admit that among the artizan class a drunkard is become a rarity, a curiosity, and an anachronism. Even in the lowest ranks of labour, among navvies, dockers, and day labourers, sobriety is the rule, drunkenness the rare exception.

I know what you are thinking, and the objection you would make if etiquette allowed you to interrupt me at this stage. What you would say, and what some of you can scarcely restrain yourselves from shouting at me is, How about the police-court convictions? If the country is as sober as you say, how do you account for the 70 or 80 thousand convictions for drunkenness in the police courts every year? Well, that is a large number, and we have it on no such vague estimate as some of the teetotal statistics are based on, but on the solid foundation of the Reports of the Prison Commissioners. Are these numbers not large enough to falsify my optimism? They are not. The numbers are large; but the proportion to the population is not large. It is very small. The 80,000 drunks are all that are convicted out of some 32 millions. But, you say, the 80,000 are convictions only, and do not include the immense number of drunkards who escape conviction. To this I answer, Pardon me, but how do you know that there is an immense number of drunkards that escape conviction? Where do you get your information? What is the evidence? Grant that not every drunkard is convicted for every drunk, and that there is a margin of drunkards in excess of convictions, I know of no evidence that the margin is a large one; and even if it be, I have a huge set-off. For the 80,000 are 80,000 convictions, not 80,000 persons; and many, very many, of these convictions are convictions of the same person over and over again. Suppose an average of only two convictions apiece, and many are convicted five and ten times, and some two and three hundred times,—but suppose only two convictions apiece,—it brings down the proportion of persons convicted to one in eight thousand. Now I say that a population in which only one person in 8000—the proportion is really less—gets sufficiently drunk to fall into the hands of a vigilant and efficient police, is a sober population; and to speak of drunkenness as a crying and prevalent evil is gross and unpardonable exaggeration. I can remember the time when judges, in charging grand juries, insisted at assize after assize, all over the country, on the large proportion of crimes that were due to drink. We never hear such charges now.

So far, then, we may congratulate ourselves. We are a sober people; and the lugubrious vaticinations of the temperance orators, according to whom the nation is drinking itself into hoggishness and imbecility, are uncalled for, and unjustified.

THE ENGLISH PEOPLE NOT DECADENT.

But now I want to take you a little farther with me. From written and spoken words we gather that we English, drunken, besotted, cowardly, and degenerate as we are, are doomed to speedy extinction; and by all the rules of the game we ought to have been extinct long ago. We know, however, that the Germans will conquer us the moment they can make up their minds to spend on the task some of the time they now occupy in drinking beer. The English nation is effete, worn out, degenerate, decrepid; a nation of imbecile, idiotic, impotent, diseased, dwarfs. Such is the cheerful spectacle held up to us by these encouraging mentors.

If I may be allowed to compare small things with great, in some respects I resemble Satan. My teetotal friends will tell you that I resemble him through and through, but my modesty will not allow me to accept the comparison. I am like him, however, in this respect, that I come from going to and fro in the earth, and from walking up and down in it; and in travelling about the country, what do I find? I find myself passing through evidences of prosperity such as can be paralleled in no other country in the world. I find thick clusters of cities, absorbed in industry, teeming with wealth; miles and miles of warehouses, factories, and shops; miles and miles of handsome prosperous suburbs. Between the cities I find a smiling country, substantial farmhouses, comfortable villages, flocks and herds innumerable. I find London the clearing house, the financial centre of gravity, of the whole world. I find that every great epoch-making discovery, with the sole exception of heliocentricism, such as gravitation, combining proportion, evolution, has been made by an Englishman. I find that with the sole exception of printing, every great mother invention, the fruitful parent of scores of others, such as steam, electro-magnetism, the gas engine, was made by an Englishman. I find that every country in the world comes to England for its live stock. The best horses, the best cattle, the best sheep, pigs, fowls, pigeons, dogs, cats, bees, are all English bred; and I have no doubt that if we tried we could breed the best polar bears and cockatoos. From methods of education to methods of managing street traffic, the world come to England to learn. Where is the evidence of decadence and decrepitude? That we have faults I will not deny. Indeed, there is one great and glaring defect in the English character, from which only the inhabitants of the northern part of this island are entirely free. It is that we have not a sufficiently good conceit of ourselves.

WHY DO PEOPLE TAKE ALCOHOL?

I cannot find any evidence of this prevalent drunkenness that is to be our ruin; but granting that it exists, and allowing to the full all the vileness and horrors that the enemies of alcohol attribute to it, and to those who take it, I still find in their utterances a conspicuous and remarkable defect. The evil effects of taking alcohol, even in the smallest quantities and on the rarest occasions, are dwelt upon, insisted on, and reiterated, until in truth the thing becomes wearisome; but there is one aspect of the subject that is strikingly and conspicuously absent. I do not now refer to the evil effect that the cult of total abstinence has upon the judgment, on moderation of statement, and sense of proportion. What I have in mind is this: it is usual and natural for an investigator who is describing some very horrible and disastrous state of things, to search out the origin of it, and to suggest a remedy by attacking the cause. If he does not do this, we are apt to suppose that he is a seeker after mere sensationalism, and only wants to make our flesh creep. I have listened to many a teetotal address, and perused much teetotal literature, and I am bound to say that I cannot find any inquiry into the reasons why alcohol is so generally attractive, nor one word to account for, or explain, or suggest, why it is that people take it. Yet, if it is as horrible, as degrading, as devastating, as it is said to be, this is an inquiry that seems worth pursuit. If those who take alcohol, like those who use fusees,

> All grow by slow degrees
> Brainless as chimpanzees,
> Meagre as lizards;
> Go mad, and beat their wives,
> Plunge, after shocking lives,
> Razors and carving knives
> Into their gizzards.

surely it is worth while to ask why they take it, why the race

is bent on destroying itself in this way, when there are so many other ways, some of them surely more agreeable than by converting ourselves into masses of corruption, and our children into gibbering idiots. That alcohol is the most speedy and effective agent for the destruction of both body and soul that the devil has been permitted to introduce to the children of men, all teetotallers are agreed, but why, in the face of its known effects, people still continue to take it, is a question that, natural as it seems, does not appear to have occurred to them.

Now to me, this is the root of the whole matter. If people were not attracted by alcohol; if they did not desire it; if they had no appetite for it; if they derived no satisfaction from it; they would not take it, and there would be no need for all these propaganda; and I submit that it is quite as useful to investigate the cause of an evil as it is to denounce it. The argument of our teetotal friends seems to be that no one but themselves knows the disadvantages of getting drunk, and that if the drunkard is only told often enough, and loud enough, and emphatically enough, that it is a bad thing to get drunk, he will immediately mend his ways and become sober.

I can only say, in the first place, that if the drunkard does not know by this time that alcohol is a poison, it is not for want of having that salutary truth dinned into his ears with sufficient frequency and emphasis at teetotal meetings and in teetotal publications; and in the second, my experience is that the drunkard knows the ill effects of getting drunk quite as well as his mentor, and sometimes a good deal better. When a patient tells you 'It is no use talking to me like that; that is all stale news to me. My father drank himself to death, and so did my grandfather, and I am doing the same. Leave me alone: you can do me no good'; or when he says 'Drinking myself to death? I know I am. Very well. I would rather die a few years sooner than give up the drink. I drink because I like drink better than anything else in the world—better than my life. My life is my own to do as I like with; and if I prefer to sacrifice it rather than give up the drink, you can't frighten me into becoming sober'; when, I say, your patients meet you in this vein, it is very little use to tell them that alcohol is bad for cabbages, and therefore bad for them; and unless you can get behind this attitude, and find out what the attraction of alcohol is, you may as well save your breath to cool your porridge.

I say that the time is long past, if there ever was a time, when any useful purpose could be served by proclaiming the ill consequences of getting drunk. The most besotted drunkard is as well aware of them as the most bigoted abstainer. I say, moreover, that the absurd exaggerations of the anti-alcohol fanatics bring discredit on their cause, and tend to make people indifferent. When the ordinary man or woman hears that alcohol is a deadly poison, and that every drop he takes brings him within measurable distance of his grave; and when he sees around him plenty of healthy, hearty people who take their pint of beer, or their half-pint of claret, every day at dinner, and live to a good old age, that is perhaps more genial, more loveable, and more generally respected than that of the frantic abstainer who warns them of their wickedness, he says 'Bosh!' and I am not sure that he is wholly without justification, though I should not myself use such a strong expression.

No. The task we should set ourselves, if we wish to diminish the small remnant of drunkards that still remain among us, is not to cry 'Bogey!' nor yet to bid them observe how vastly superior to the rest of mankind are the people who do not take beer with their meals, but to search out the reasons for drinking. Why does a man like his glass of beer or wine? Why are most of us content with a glass or two, while others must go on until they are beastly drunk? These are the questions that must be asked and answered if we want to accelerate the natural process by which drunkenness is dying out amongst us.

Why do people take alcohol? That is the crux of the matter; and it is important to recognise that no one answer will account for all the cases. The reason is different in different people; and while I admit and declare that in some people, and for some quantities of alcohol, the reason is a bad reason, I contend that in other people, and for other quantities, the reason is a good and valid reason; and that in these cases alcohol is a gift of God that should not lightly be rejected.

The simplest answer no doubt is Because they like it; but this answer is true only of a minority of alcohol drinkers, probably of only a small minority. If, instead of raving indiscriminately against all who take alcohol, whether in excess or in moderation, we ask of them why they take it, we shall find but few who will say they take it because they like it—because the taste is agreeable to them; and most of those who do answer thus, probably misapprehend the meaning either of the question or the answer. There are, in fact, few people who are endowed by nature with a palate so discriminating that they can appreciate the bouquet and the flavour of a fine wine; and the majority of those who drink to excess care very little what the taste of their liquor may be, so that it is strong enough. Eau de Cologne, methylated spirit, or even the liquor in which anatomical specimens have been preserved, will serve their purpose, if nothing more tasty is available.

EUPHORIC EFFECTS OF ALCOHOL.

Another answer that we shall often get is that alcohol is taken to quench thirst; but this answer, although it may be given quite *bona fide*, is, we may be sure, never true. Persons who answer thus do not distinguish. They are not accustomed to analyse their own sensation; and since they have a desire for alcohol, and alcohol is a liquid, they call their desire by the common name that is given to the desire for liquid as such, and say they are thirsty. But they are not thirsty in the true sense. If they were, they would drink, not alcohol, which does not quench thirst, but water, or some other bland liquid. What they mean when they say that they are thirsty is that they have a thirst for alcohol, which is quite a different thing. What the vast majority of persons who drink alcohol, drink it for, is not because they like the taste of it, nor because they are thirsty, but for what is sometimes called its physiological effect, but what ought to be called its psychological effect, that is to say, in plain terms, because it makes them feel jolly. It raises their spirits. It confers happiness. It gives them a good conceit of themselves. Is it any wonder that it is so much valued by the English, who are so wanting in this useful sentiment? Is it any wonder that the Scotch, who are not, as a rule teetotallers, are so richly endowed with this quality? It generates a sense of capability, which is one of the main elements in happiness. Now, there is nothing intrinsically or positively wrong in being happy. I have the temerity to assert that it is in itself a state of mind not blameworthy, but praiseworthy. It is not undesirable, but desirable. I know that this is a very unpopular doctrine; and that it is looked upon by many as a very immoral doctrine; but I take my courage in both hands, and I assert firmly that on the whole, and other things being equal, it is better for ourselves and for all around us that we should be happy, than that we should be unhappy.

I daresay that some of you know that my practice is in the treatment of mental disorders; and there are few commoner disorders of mind than an unreasonable depression of spirits,—a feeling of misery that is not justified by the circumstances in which the patient is. When such a patient comes to me and demands relief, sometimes almost with menaces, I have said to him, 'My good sir, I cannot give you two tablespoonfuls of happiness three times a day out of a bottle.' That is what I have said: but I didn't mean it. I could have given him a prescription, which he need not have gone to a chemist to get made up, and which would have given him at any rate temporary relief. If I have not done so, it is because I am not as blind to the defects of alcohol as my friends the teetotallers are to its merits. I knew that for various reasons that I need not enter into now, it would be a dangerous expedient, and I have not followed it. But the fact remains that alcohol does raise the spirits; it does make a person happy, and this is the main reason and the main effect for which it is taken. That the effect is transient is no argument against the use of alcohol. It is better to have loved and lost than never to have loved at all; that is to say, it is better to be happy even for an hour or two than not to be happy at all. The unfortunate thing is—and the whole case against alcohol rests upon this—that with use, the effect diminishes, and to obtain the same effect, the dose has to be continually increased. Still, although if alcohol is taken frequently, the dose must be increased to produce the same effect, this is not true if it is taken seldom; and even if it is taken regularly, and always with the same moderation, although the full euphoric effect is not produced, some effect is produced; and the regular

imbiber of moderate doses of alcohol is by so much better off than the abstainer, that though he does not attain to the hilarious exhilaration of his first dose, he yet reaches a placid contentment, a good natured geniality.

THE POWER OF UNLOCKING ENERGY EXERTED BY ALCOHOL.

I believe that the majority of drinkers take alcohol for this euphoric effect; but certainly this is not the motive with all of them. There is another physiological effect of alcohol which is upon occasion of the utmost value, and which, as far as I know, has never been referred to by any writer on the subject except myself. Yet it is so manifest, that the only way in which we can account for the universal silence on the subject is that those who have written about alcohol have gone into the matter with the predetermination to find it all bad; and this prejudice has blinded their eyes to patent and clamorous fact. This unrecognised effect of alcohol is the effect for which many seek its aid, and is this:—Alcohol has the power to unlock the store of energy that exists in the brain, and to render available, for immediate expenditure, energy that without its use would remain in store, unavailable for our immediate needs. I may illustrate what I mean by one or two parallels. It is well known in agriculture and horticulture that the heaviest crops are not to be secured by giving manure *ad libitum*. If farmyard manure is given in increasing quantities, a stage is at last reached at which the yield is not increased, and may even be diminished. If, when we have reached the maximum crop that manure will produce, we give to our land, instead of manure, a dressing of lime, we get always an increase, sometimes an enormous increase, in the yield. Why is this? Lime is not a food for most plants, any more than alcohol is a food for most men; but yet by the administration of lime we may add enormously to the energy of the growth of plants, and by the administration of alcohol we can add very largely to the output of energy by men. The adversaries of alcohol tell us, with an iteration and reiteration that deserve Falstaff's epithet, that alcohol is not a food. They do not tell us that roast beef is neither clothing nor house room, yet the one statement is as good an argument against the use of roast beef as the other is against the use of alcohol. Lime is not itself a plant food, except in special cases, but it unlocks and renders available to plants the store of food that exists in the soil, but is inaccessible to the plants, and that without the aid of lime would be locked up against them. Similarly, though alcohol is not itself a food, it does without the slightest doubt enable many people to assimilate and digest food that without its aid would be unavailable to them. I do not pretend that this is the most important function of alcohol. I am coming to that; but it is indisputably a function, and a useful function; and I shall not be convinced by any number of experiments in which alcohol has been administered to robust and unwearied guinea-pigs, without increasing their weight, that a glass of wine will not assist the digestion of a harassed man of business at the end of a tiring day.

However, this is rather by the way. The digestive value of alcohol is only one instance of its power of opening the store of energy, and letting some go free. Let us take another illustration. You have some of you, as I have reason to know, prepared yourself for the ordeal that you are now undergoing, by taking a glass of champagne with your dinner; and others of you may have solaced yourselves with the more pungent but less effectual ginger-beer. Those who have studied the manners and customs of these beverages know that, when first poured out, they effervesce freely; but after a time they go flat, and are much less palatable. But the fact that bubbles of gas no longer rise spontaneously does not mean that no gas is contained in their depths. All that would come out spontaneously is come and gone, but we can get more out if we add an appropriate liberator. Drop some powdered sugar into each glass, and see what happens. Immediately a swarm of bubbles rises, and breaks at the surface. Just in the same way, the energy that accumulates in our brains during the night, spouts out and froths over when the cork of sleep is drawn; but towards the end of the day the bubbles are few, and rise languidly. The liquor that was so brisk and sparkling is become flat and stale; and to extricate a new spurt of energy we must drop some sugar into the golden bowl. What we use for the purpose is, indeed, not plain sugar, but altered sugar—in fact, fermented sugar. We add a little alcohol, and in a few minutes the liquor begins to fizz again. The energy that was locked up is set free; the task that was insurmountable becomes easy.

The evidence that alcohol has this liberating effect on the energy stored in the brain, is manifold. In the first place, when is alcohol taken? What are the times and seasons for taking it? It is taken towards the end of the day. None but a hardened toper takes any form of alcoholic drink in the morning. It is true that our ancestors,

> Ere coffee or tea or such slip-slops were known,

took beer for their breakfast, but the beer that they took at this meal was always by choice small beer, that is to say, beer with the minimum of alcoholic content. Even that hardened toper, Christopher Sly, when he wakes in the morning after a debauch overnight, calls for a pot of the smallest ale. Why is alcohol drunk by sober people late in the day only, and never in the morning? Because in the morning the store of available energy is ample, and is not only spontaneously liberated, but wells up and bubbles out of us. It is not till it ceases to flow spontaneously that a liberator is needed.

For the same reason, children, in whom the flow of energy is well-nigh inexhaustible, neither need, nor desire, nor like alcohol. It is distasteful to them; and it is harmful to them; and the reason is easy to see. They need no liberator for their stored energy.

Again, some confirmed drunkards owe their habit to the fact that they have habitually overdrawn their account of energy, and have gone on working to the exhaustion point. When they first reach this stage, and the eager mind still craved, or dire necessity demanded, further exertion, there was at hand a ready means of compassing the impossible. They had drawn upon their available store of energy until no more would come, but there was more in store, though they could not get it out; and by taking alcohol they could make the stale liquor fizz again. They could release their reserves, and with their aid complete the task that without them was insurmountable. The next time the difficulty was felt, it was surmounted by the same means, and gradually a habit was established. But soon a new feature showed itself. When a spirited horse first begins to tire, a mere touch of the whip starts it into a gallop; but as the poor creature becomes more and more exhausted, it must be first lashed, and at length unmercifully flogged; and even then we can get out of it no more than a jog-trot. So when the jaded mind or body first demands a stimulus, a glass of wine suffices to start it into full activity again; but with each repetition more must be taken to produce the same effect, until at last the unhappy victim cannot put on his clothes in the morning till he has had his dram; cannot perform his daily task with a smaller stimulus than is supplied by a bottle of whiskey.

You will observe that I am not wilfully blind to the ill effects of alcohol as my friends the teetotallers are to its merits. I do not say it is advantageous, as they say it is pernicious, at all times, in all circumstances, to all people. Any such sweeping statement about anything, I care not what, raises an instant suspicion of prejudice and exaggeration, even if it does not carry on the face of it its own refutation. I assert that in some cases, to some persons, alcohol is pernicious; and I point out how and why it is pernicious; but I should not pride myself on my judgment if on this account I was blind to its advantages to other persons in other circumstances. I do not say that because food is good for everyone in moderation, and when they are hungry, therefore everyone who is allowed to have food will eat till he bursts; nor do I say that because some people eat till they burst, therefore no one should be allowed to touch food. There seems to me to be a want of logic somewhere in this reasoning, but my friends the teetotallers do not recognise these subtle distinctions. With them, the man who will not agree that alcohol is the most virulent poison in the pharmacopœia, who will not admit that 'one or two at most, drops make a cat a ghost, useless except to roast,' is a shameless and irreclaimable drunkard, and worse than that, and worse than that, and worse than that.

Is it not clear that if alcohol has the power of enabling us to draw upon our reserve of energy, then we have in it an agent that may be of the greatest possible service in grave emergencies? and although it is open to abuse—as what useful agent is not?—yet on occasion it is most valuable and precious, and is not to be reviled and discarded because a

very few use it excessively and injuriously. If alcohol does act in the way I describe, and enables us to draw upon our reserves, then it is clear that it will leave us more exhausted—it will leave the nervous system more depleted of energy, more emptied of its proper contents—than if we had not taken it; and therefore we shall need more rest and more sleep to rebuild our reserves. It is not without significance that in this matter alcohol provides its own remedy, for whatever its vices and dangers, no one can deny that a sufficient dose of alcohol is as effectual a soporific as even an inaugural address.

If alcohol has this power that I claim for it, of liberating latent energy, it will exercise the power, not only when the available energy is used up and exhausted, but at all times; so that even when energy is flowing freely out of store, the taking of alcohol will add to the freedom of the flow, and this augmentation of the supply of free energy will show itself in increased activity of body, or of mind, or of both. That alcohol does increase the activity of both body and mind there is abundant evidence to show. The increase is but temporary, and is apt to be followed by exhaustion, but increased activity there always is. What form the activity will take must depend upon the state of the different parts of the brain, as to repletion or exhaustion, when the alcohol is taken. If the highest level of the brain contains plenty of energy, this energy will be set free by the alcohol, and the result will be increased activity of mind. If these higher levels are empty, more energy cannot be had from them, and what increase of activity results will be activity of body and will be crude and unintelligent; and between these two extremes there will be every grade. Is there any evidence that these are in fact the results of taking alcohol? I think there is. I can adduce abundance.

When a party of strangers sits down to dinner how stiff, how formal, how constrained, is not their conversation through the soup and the fish! But note the transformation when the champagne has been round. Then the string of their tongues is loosed. The room hums with animation; the shy find themselves at their ease; the dull become witty; the clever become brilliant; and even the ill-dressed forget their embarrassment. But let the alcohol be taken by those whose higher brain levels are ill-developed, or have been exhausted and placed out of action by previous doses of alcohol, and what is the result? Still there is over action, but the over action is now over action of body, and is crude, unintelligent, and ill-directed. No teetotaller will deny that a man in his cups is apt to be boisterous and uproarious. He sings and shouts; he jumps over the chairs and tables; he may even smash the furniture; all manifestations of an increased output of energy from a low level.

I have pointed out to you how natural and how universal a custom it is to postpone our ingestion of alcohol to the later hours of the day, and I have indicated the reason. It is because in the morning, after the recuperation of sleep, the outflow of energy is at its maximum, and needs no reinforcement. It is when the occupations of the day have depleted our stores of energy that we find the liberating effect of alcohol so potent and so advantageous. In the morning there is no need of it, and its absence is no drawback. Then it is not missed. Those of you who have attended an annual meeting of the British Medical Association have, no doubt, received an invitation to a non-alcoholic feast, which is held for the encouragement, the countenance, and the advocacy of the cult of total abstinence from alcohol. It is very significant that this non-alcoholic banquet always takes the form of a breakfast. It is held first thing in the morning. The abstainers, you see, are wise in their own generation. In the morning the stimulus of alcohol is not needed. Its absence is not felt. The speeches, so far as my recollection serves me, are not much more dull, nor is the audience much more bored, than they are at the annual dinner of the Association; but what the funereal gloom of a teetotal public dinner would be, the Medical Temperance Society has wisely not endeavoured to test.

In further corroboration of my thesis that the effect of moderate doses of alcohol is to stimulate the mental faculties of those who possess mental faculties, and stimulate those faculties which some think the highest, such as imagination, fancy, picturesque imagery—the artistic faculties as we may call them—I point to the fact that there has never been one distinguished originator in any branch of art who did not take alcohol, at least in moderation, and many have taken it, alas! in excess. It is the fact, indisputable if lamentable, that it is the great nations, the victorious nations, the progressive nations, the nations that are in the van of civilisation, that are the drinking nations. I don't say they are great because they drink, but I do say that this disposes of the argument that a drinking nation is necessarily a decadent nation.

A world of total abstainers might be a decorous world, a virtuous world, a world perhaps a little too conscious of its own merits; but there is no reason to suppose that it would be an uncontentious or unprejudiced world, or a world from which exaggeration of statement, intemperance in speech, or intolerance of opinion would be banished; and there is some evidence to make us anxious lest it should be a drab, inartistic, undecorated world; a world without poetry, without music, without painting, without romance; utterly destitute of humour; taking sadly what pleasures it allowed itself; and rather priding itself on its indifference to the charms of wine, woman, and song.

I should like, if possible, though I fear the effort is hopeless, to guard myself against misinterpretation. I make no doubt that it will appear in the papers to-morrow that I have advised you all to go home and get blind drunk—and that you followed the advice. I make no doubt that I shall leave this room with the reputation of an habitual drunkard, and that I shall be known in future as the Dop Doctor; for there is a considerable section of my countrymen who cannot distinguish between moderation and excess, either in drinking, or in statement, or in anything else. I must put up with that, however, and fortify myself as best I can with the consciousness, which I hope you will share with me, that all I have said is to urge that we should appreciate and value at their actual worth, no more and no less, the kindly fruits of the earth, so as in due time we may enjoy them.

CYSTS OF THE VERMIFORM APPENDIX.

A CONTRIBUTION TO THE KNOWLEDGE OF PSEUDOMYXOMA OF THE PERITONEUM.

BY THOMAS WILSON, M.D. LOND., F.R.C.S. ENG.,

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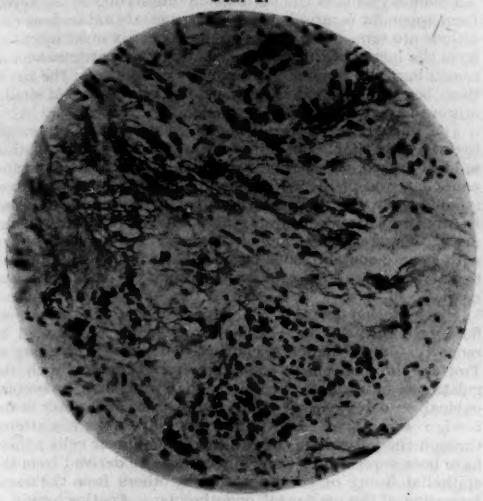
THE presence of solid transparent gelatinous material in large quantities in the peritoneal cavity is now proved to originate in the great majority of cases in a peculiar variety of glandular cysts of the ovary. In a paper read before the Obstetrical and Gynæcological Section of the Royal Society of Medicine on Oct. 10th, 1912, I related six cases of this character from my own operative experience, and examined the condition from the pathological as well as the clinical standpoint. The gelatinous material contains pseudomucin, and is secreted by cells which in a single layer line the loculi of a multilocular cyst of one ovary; the pedicle of the cyst is usually well formed, the Fallopian tube and mesosalpinx are generally unchanged. The parietal and visceral peritoneum in contact with the effused jelly usually shows signs of chronic irritation due to attempts to absorb or encapsule the gelatinous effusion. The omentum is commonly surrounded and infiltrated, forming a broad, firm, thick plate, the so-called omental cake. (Fig. 1.) Nothing in the mode of onset, symptoms, or physical signs enables a diagnosis to be made before the abdomen is opened. Treatment, formerly very unsatisfactory, is now much more successful, but even in favourable cases the ultimate prognosis is uncertain, since small collections with living epithelium may be left in some of the recesses of the peritoneal cavity, to burst into renewed activity after a longer or shorter time.

The condition just described used to be called "colloid cancer of the ovary or peritoneum," but as it became more fully studied other names were applied. "Pseudomyxomatous degeneration of the peritoneum" (Mennig) and "chronic pseudomyxomatous peritonitis" (Virchow) suggested that the peritoneum was the primary seat of the disease. "Myxoma of the ovary" (Netzel) ascribed the gelatinous effusion to the organ in which it originates. In

1884 Werth studied the condition and suggested the name "pseudomyxoma of the peritoneum." Soon afterwards Olshausen and Ackermann proved that in at least some instances true metastases with living and active epithelium were found at a distance from the primary growth in the ovary. (Fig. 2.)

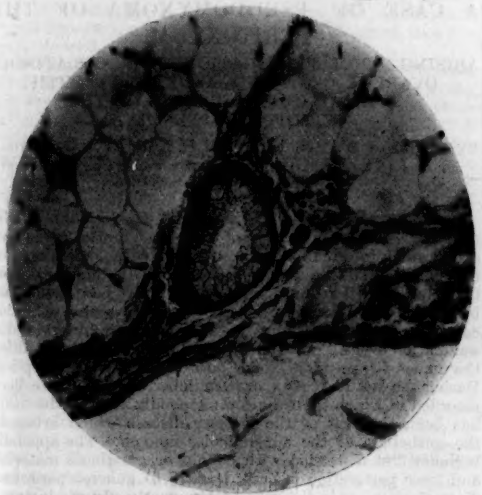
FIG. 1.



Section of an omental cake under a high power. The gelatinous material appears to be soaking into the tissues. On the left a collection of lymphocytes; on the right of the lower part of the section a large number of plasma cells, with small oval and round nuclei and swollen lightly staining cell bodies, appear to be engaged in the absorption and removal of the gelatinous infiltration.

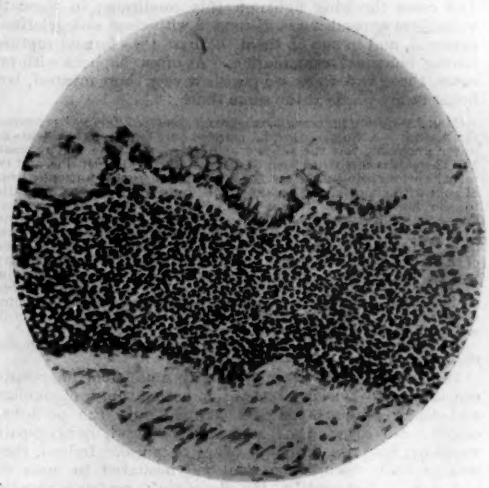
The term "pseudomyxoma of the peritoneum" may be retained as a convenient label for these cases, and will include the immense majority of the cases formerly known as "colloid cancer." Occasionally a similar affection is observed in which the gelatinous stuff has its origin in the vermiform appendix. This form of peritoneal pseudomyxoma is apparently much more common in the male, and the first recorded case was found unexpectedly at a necropsy by Fraenkel in 1901; the subject was a man aged 79; there was a cystic dilatation of the vermiform appendix, which had ruptured. Since then the affection has been discovered at an operation for hernia and during the operation for appendicitis, and it has been found as an obscure form of progressive enlargement of the abdomen extending over ten years. In 1910 Wilfred Trotter published the tenth case, and stated that only two patients had recovered—his own patient spontaneously and a patient radically operated upon by Neumann. In the same year an eleventh case was reported by R. W. Moore. His patient was a cook, aged 44, who had a second attack of right iliac pain after a two years' interval. On opening the abdomen about one pint of light brown-coloured gelatinous material escaped; both ovaries were normal, the vermiform appendix disintegrated.

FIG. 2.



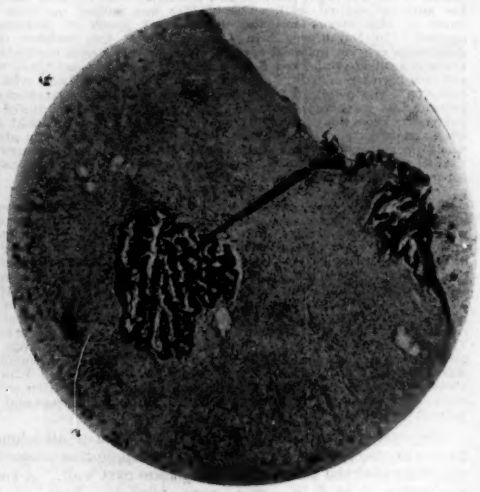
A metastatic alveolus in the omentum from a case of ovarian pseudomyxoma.

FIG. 3.



Case 1. Lining of cyst under a high power; a portion of lymphoid tissue with lining of a single layer of secreting epithelium.

FIG. 4.



Case 2. Glandular collections from the lining of the cyst medium power.

In 1911 Cramer published a twelfth case, which seems to have been the second observed in women.

Cysts of the appendix that have not yet burst are occasionally met with; thus, Weinhold removed a large cyst of the vermiform appendix from a woman aged 74. The tumour was cystic and tense, with an opaque white surface and

slightly turbid contents; it was attached to the cæcum by a pedicle formed of the proximal half inch of the normal vermiform appendix, and before operation had been diagnosed as a pedunculated myoma projecting from the right side of the uterus.

In the course of my operative experience I have met with two cases throwing light on this condition; in these the vermiform appendix was distended with clear soft gelatinous material, and in one of them the cyst thus formed ruptured during bimanual examination. As often happens with rare cases, these two were seen with a very short interval, both being in my wards at the same time.

CASE 1.—*Cyst of the vermiform appendix removed during hysterectomy for fibroids.*—A woman, aged 52, married only four and a half years and never pregnant, was the subject of numerous uterine fibromyomata. For 12 months there had been ill-defined bearing-down pains, and two months before being seen for the first time there was an acute attack of pain with vomiting. Numerous adhesions were present in relation to the fibroids, none in connexion with the distended vermiform appendix. This last formed a pedunculated elongated cyst measuring $2\frac{1}{2} \times 1 \times \frac{1}{2}$ in. The wall was firm, fibrous, and opaque; the lumen, distended with clear mucinous fluid, did not connect with the lumen of the stump of appendix that formed a pedicle about half an inch in length. Under the microscope sections of the wall showed two layers of muscular tissue and a lining of mucous membrane with lymphoid tissue and mucous glands; a single layer of secreting epithelium similar to that lining the glands covered portions of the surface of the mucous layer. (Fig. 3.)

The patient made a good recovery and remains well two years after the operation.

The second case was sent in with a probable diagnosis of ovarian cyst. During gentle examination rupture took place and the gelatinous contents escaped into the peritoneal cavity. No reaction of any kind followed, neither pain, vomiting, nor rise of temperature or pulse. Indeed, there was so little disturbance that one hesitated to open the abdomen. Fortunately, the coexisting prolapse required operation, and the nature of the cyst was then discovered.

CASE 2.—*Cyst of vermiform appendix ruptured during examination; removal at the same time with radical cure of utero-vaginal prolapse.*—A woman, aged 68, was admitted to the Birmingham General Hospital on Oct. 10th, 1910, complaining of abdominal pain and swelling of three months' duration, associated with nausea and vomiting. The patient was thin, and looked about her age. In the lower abdomen a well-defined rounded lump, not tender, extended $1\frac{1}{2}$ inches above the pubes on the right of the middle line. On vaginal examination the upper part of the vaginal wall and the cervix felt horny, the result of a large old-standing prolapse. In the right lower abdomen a well-defined thin-walled cystic tumour as large as a fist was felt. While this was being examined bimanually without the use of force it was felt suddenly to burst between the examining hands and disappear. There was no pain or other reaction on the part of the patient. Twenty-four hours later there had been no rise of temperature or pulse, nor any other complaint.

Operation for the prolapse was proceeded with, the patient being placed in the lithotomy position and a longitudinal incision made in the anterior vaginal wall. The bladder was pushed up from the front of the uterus and the utero-vesical pouch of peritoneum opened. On the uterus being drawn out of this incision thick gelatinous greyish material escaped from the peritoneal cavity to an amount estimated at from 6 to 8 oz. Both ovaries and tubes were atrophied and senile, but showed nothing abnormal, not even an adhesion. The pelvis was elevated, and with the aid of retractors its interior was inspected. Attached to the right posterior brim of the pelvis was seen the opaque white corrugated wall of a collapsed cyst whose pedicle could not be reached through the vagina. The uterus was now sutured between the base of the bladder and the anterior vaginal wall; and the anterior vaginal incision was closed by catgut sutures. An extensive colpo-perineorrhaphy was also done. The patient was then placed in the Trendelenburg position and the peritoneal cavity was opened by a suprapubic transverse fascial incision. The collapsed cyst above mentioned was in close connexion with the end of the cæcum, from which two of the three longitudinal muscular bands could be traced on to the attached end of the cyst; the internal and posterior band became lost under some fat. During the removal of the cyst the muscular wall of the cæcum was bared over an area $\frac{3}{4} \times \frac{1}{2}$ in., but the lumen was not opened; two or three bleeding points were ligatured and the raw surface covered in by peritoneum. There were a few adhesions of the cyst to the end of the cæcum and to the peritoneum over the posterior part of the pelvic brim. The uterine appendages were again carefully examined from the abdominal side and showed nothing at all abnormal. The omentum was adherent to a part of the left anterior abdominal wall 3 inches above the pelvic brim and at some distance from the position of the cyst. The abdominal incision was closed without drainage and the patient made a good recovery.

The cyst was unilocular with a broad base of attachment to the cæcum; at its distal end was a nipple-like projection which formed the thickest portion of the cyst wall. A small mesentery, $\frac{1}{2} \times \frac{3}{4}$ in., was seen near the base of the tumour; there were no adhesions. The nipple-like projection was examined microscopically, and shows in the cyst wall discrete collections of lymphoid tissue and a few groups of glands of appendicular type. The interior is for the most part bare of epithelium. (Fig. 4.)

Unfortunately the gelatinous material in these cases was not tested chemically. Trotter states definitely that the jelly gives the microchemical reactions of mucin, but this is a point that requires further investigation. In pseudomyxoma of ovarian origin the jelly-like consistence is due to pseudomucin. Metastases such as occur in ovarian pseudomyxoma have not yet been observed in the cases of appendical origin.

Pseudomyxoma of the peritoneum originating in the vermiform appendix is rare, because the necessary antecedent conditions are rare. The cavity of the appendix must be cut off from the lumen of the cæcum, usually by a cicatricial septum remaining from some old inflammatory condition; the cavity then becomes distended with mucus and a cyst of similar origin to a hydrosalpinx is formed.

The immediate cause of cyst formation is obscure. In hydrosalpinx there is in the early stage usually inflammation, mild in degree, of the mucous lining of the Fallopian tube, while later on further distension is due to exudation of non-inflammatory nature along with atrophy of the mucous coat. In my two vermiform cysts there was no sign of inflammatory change in the mucous lining. The appendical cyst with aseptic contents must be sufficiently free from adhesions to allow of its rupture or perforation into the open peritoneal cavity.

The irritation caused by the presence of the gelatinous fluid is slight, so that it usually becomes encapsuled by recently formed delicate connective tissue. According to Trotter, the peritoneal endothelium in contact with the gelatinous effusion may persist and is apt then to become cubical or columnar, or it may grow over and cover in the foreign substance. Most observers have found scattered through the jelly chains of cubical or columnar cells; these have been supposed by some observers to be derived from the epithelial lining of the appendix, by others from the transformation of the peritoneal endothelium. Another origin is likely for many of them, which may be plasma cells engaged in the attempt to absorb the effused substance. The peritoneal changes are due either to attempts at absorption or to plastic inflammation of mild degree set up by the presence of the foreign material.

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A CASE OF PSEUDOMYXOMA OF THE PERITONEUM

ARISING FROM PERFORATION OF A GELATINOUS OVARIAN CYST AND ASSOCIATED WITH SIMILAR CYSTIC DISEASE OF THE VERMIFORM APPENDIX.

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THE nature and origin of the so-called *gelatinous*, *colloid*, or *pseudomyxomatous* cysts of the ovary form a subject about which information is scanty and pathological opinion ill defined. The tendency of these cysts to undergo spontaneous perforation and then to attack the peritoneum has been recognised for many years. The peritoneal affection consists of epithelial implantation, followed by wide dissemination over all parts of the abdomen. To this condition the name of "pseudomyxoma peritonei" has been applied. During the last 11 years a small number of cases have been recorded in which the vermiform appendix and not the ovary has been the seat of the primary disease which arises in the epithelium of the appendicular mucosa. The appendix becomes first distended with colloid or gelatinous material, and later perforation occurs, leading to general peritoneal dissemination, as in the case of the ovary. In the instance here recorded, while the ovary was the organ primarily affected, the vermiform appendix was the seat of an exactly similar, although apparently independent, change.

Instances of a rare disease which present any unusual features should always be placed on record for the information of subsequent workers, who may be able to put to practical uses clinical facts which at the time of their occurrence appeared incapable of explanation.

The patient, a married woman, first consulted me in August, 1908. She was then 46 years of age and had ceased to menstruate in 1897, at the early age of 35. She had had no children. In 1891 she had an illness which was said to be "typhlitis," but in other respects her past history was good and presented no points of importance. She had never been very robust. Her present complaint was of abdominal enlargement, which had come on gradually and had increased at a slow rate so that she was unable to remember the time at which it had been first noticed; "several months" was as near as she could recollect. There had been no pain, but she had of late felt fatigued and unfit for exertion. There was no vaginal discharge of any kind, and there had been no return of the periods. She was a little anæmic, but did not look ill.

On examination of the abdomen an oval, soft, rather ill-defined tumour was found occupying the whole of the right side of the abdomen from the costal margin to Poupart's ligament. It was dull on percussion, and its mobility was very limited. The epigastric region was resonant and a colon note could be made out in the right flank outside the limits of the tumour; but the left flank was dull. There was, however, no definite evidence of free fluid, for the dulness did not shift with change of posture, and there was no fluid thrill. On vaginal examination a normal-sized anteverted uterus was found, and the lower pole of the tumour could be felt on the right side, but only with considerable difficulty; it appeared to lie above the level of the pelvic brim. The diagnosis made was simply "ovarian cyst—right side."

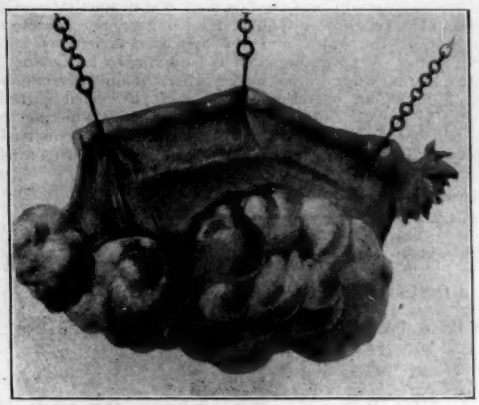
Five days later the abdomen was opened and the tumour removed. It was a cyst of the right ovary which had ruptured, and there was a large amount of clear yellow jelly in the peritoneal cavity. The walls of the cyst were very friable and it was further torn in extracting it, so that the abdomen was flooded with the jelly; that contained in the cyst was identical in appearance with that in the peritoneal cavity. A good pedicle was obtained as the tissues of the broad ligament were not friable. On attempting to remove the masses of jelly from the peritoneum great difficulty was found owing to its firm adhesion; the peritoneal membrane was much injected in all parts. After swabbing out as much of it as possible the abdomen was flushed with normal saline solution, but nothing like a complete cleansing of the peritoneum was possible. The uterus and the left tube and ovary were normal, except for adherent jelly. No note was made of the condition of the vermiform appendix, and I cannot recollect whether it was looked at or not. The patient made a good recovery, and three months later I heard that she was quite well.

I did not hear of her again until December, 1910, two years and four months after the operation. She then wrote to say that she had been feeling unwell for some time, that there was a good deal of enlargement of the abdomen, and much abdominal discomfort. I saw her a few days later, and this time found a soft, elastic, ill-defined tumour in the left side of the abdomen, of approximately the same size and much the same general characters as the first one. The parts of the abdomen not occupied by the tumour were resonant to percussion. It was clear that another tumour had grown in the left ovary, and I greatly regretted that I had not removed it at the first operation.

The second operation was performed on Dec. 9th, 1910, when a perforated cyst of the left ovary was found, along with abundant and widely disseminated colloid material covering the peritoneum in all visible parts. The jelly was for the most part clear yellow material, of the colour of pale orange pulp, and was precisely uniform in characters wherever it was found. The cyst wall was so friable that the tumour broke up completely in handling, and it was ladled out of the abdominal cavity in handfuls, the pedicle being the only part where resistant tissues remained. The peritoneum was thick and red, and the colloid was closely adherent to it. The uterus was small, and the right broad ligament was unaltered except for adherent jelly. The vermiform appendix was sought for and examined, and was found to be cylindrically dilated from its tip to a point half an inch from the wall of the bowel. It was about the size and length of the operator's little finger, and the undilated part formed its pedicle. Its surface was rough and of a dull red colour; there was not much colloid adhering to it, but several long slender adhesions were found. The walls of the cæcum and adjacent coils of ileum were rough and deeply injected, but otherwise unaltered. The appendix was removed and the stump invaginated, and finally the peritoneal cavity was flushed with warm saline, but a great deal of adherent colloid remained when this had been done. The patient made a good recovery from the operation.

On opening the appendix it was found to be distended with clear pale yellow jelly, closely resembling that of the ovarian cyst, but somewhat paler in colour. It was lightly adherent to the mucosa, and the greater part of it was extruded through the opening by retraction of the muscular wall. (Figs. 1 and 2.)

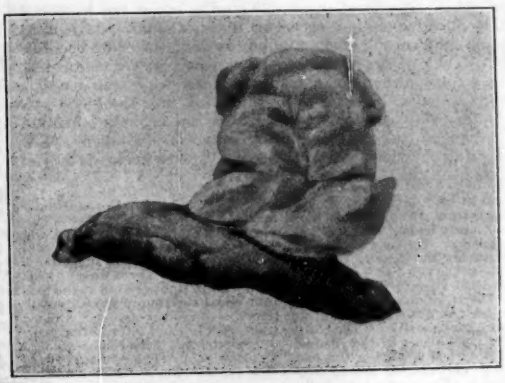
FIG. 1.



A portion of the wall of the ovarian cyst suspended by its Fallopian tube. The colloid material is aggregated in rounded masses, which owe their shape to being formed by distension of small compartments in the cyst.

Microscopic examination of the wall of the ovarian cyst showed high palisade epithelium in great abundance, and for the most part in an advanced stage of degeneration. Here and there well-preserved goblet cells distended with secretion were seen; generally, however, the cell bodies were converted into a coarsely granular débris, the nuclei at their bases being well preserved. On examining the wall of the appendix the greater part of the mucosa was found to have been destroyed. Patches remained, however, which showed aggregations of coarsely granular amorphous material adherent to their free surface—representing the colloid.

FIG. 2.



The vermiform appendix. A longitudinal incision has been made through which a mass of colloid material has been extruded. The peritoneal surface of the appendix is seen to be roughened.

The epithelial cells themselves were either distended to bursting point with secretion or the bodies were destroyed, leaving the nuclei either alone or along with a certain amount of granular amorphous material. It was quite clear from these appearances that the colloid material contained in the appendix was the product of its own mucous membrane, and was therefore in its origin independent of the ovarian cysts.

The simultaneous and independent occurrence of this colloid disease in the ovary and the vermiform appendix has not, I believe, been previously recorded. The disease is epithelial in origin, and the fact that it may simultaneously arise in two types of epithelium of such divergent characters as that of the ovary and the appendix is curious and interesting. Although regarded as bordering on malignancy, many ovarian cases are on record where complete recovery has followed an operation, which must be called partial owing to the difficulty of removing the colloid adhering to the peritoneum. In the present case the patient has remained well up to the time of writing, one year and eleven months after the operation.

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A NOTE ON THE OCCURRENCE OF THE COLON BACILLUS IN THE BLOOD.

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AND

H. L. TIDY, M.D. OXON., M.R.C.P. LOND., M.R.C.S. ENG.

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WHILE infections of the body tissues by the bacillus coli are extremely common, and while there is every reason to believe that spread of infection in no inconsiderable number of cases takes place by way of the blood stream, it is remarkable how rarely direct proof of blood infection can be obtained during life. We are not acquainted with any publication of English literature in which the bacillus is claimed to have been obtained from the blood stream. Blood cultures made from persons suffering from undoubted coli infections are almost invariably sterile, but it has happened to us on three distinct occasions during the last nine months to obtain from the blood a pure growth of the colon bacillus. In two out of the three cases the blood was withdrawn at the commencement of a true rigor, and while the patients were actually shivering. In the third case the blood was obtained three and a half hours after a rigor. In other and subsequent cases of similar infections blood taken a few hours after a rigor has been sterile. The following is a brief account of the three cases referred to:—

CASE 1.—A man, aged 28, was admitted to the London Hospital under the care of Dr. Lewis A. Smith. His history was that four weeks previously he had been suddenly seized with acute abdominal pain and vomiting. The pain had been present at intervals since the onset. On admission the general condition and aspect of the patient suggested a man in the third or fourth week of typhoid fever. There were no local physical signs of disease other than indefinite signs of fluid at the base of the right lung. The Grünbaum-Widal reaction was completely negative and the blood count was that of acute inflammation. A blood culture was sterile. The temperature was high and intermittent with five rigors later in the disease. A second blood culture was made a fortnight later during the early part of a rigor. 10 c.c. of blood were taken and divided among four broth tubes. Three tubes remained sterile. The fourth tube yielded a growth of the bacillus coli. The cultural reactions of this bacillus were fully investigated and were in every way typical. The patient died 12 days later, and post mortem were found a purulent appendix, peritonitis, a subphrenic abscess, pylephlebitis, and a considerable abscess in the liver.

CASE 2.—A man, aged 56, was admitted to the London Hospital, under the care of Mr. Frank S. Kidd, with a history of difficult micturition for 18 months. On admission he was suffering from acute retention of urine and an enlarged prostate. The bladder was washed out and a rigor occurred during the process. Subsequently a suprapubic cystotomy had to be performed for secondary hæmorrhage, and blood and pus were present in the urine throughout. About seven weeks later 6 c.c. of blood were withdrawn from a vein three and a half hours after a rigor and divided among four broth tubes. Three tubes yielded a growth of the bacillus coli, typical in all its cultural characters. The patient died three weeks later from sepsis and a secondary hæmorrhage, which post mortem was found to have been due to ulceration into the deep epigastric artery.

CASE 3.—A married woman, aged 40, was admitted to the London Hospital under the care of Dr. Francis Warner. Her history was that she had been confined five weeks previously and had been quite well until the tenth day after her confinement, when she got up, but had a shivering fit and returned to bed. She had been in bed since and had had several shivering attacks. On admission the patient looked extremely ill, and was found to be suffering from a high intermittent temperature with occasional rigors. There was no abnormal vaginal discharge and the pelvic organs were healthy. A culture of the blood was made during a rigor. 5 c.c. of blood were obtained and divided among four broth tubes. All tubes yielded a profuse growth of a colon bacillus. A catheter specimen of urine contained pus and gave a pure culture of a colon bacillus in all cultural characters identical with that obtained from the blood. This patient is still in the hospital, and after three weeks remains in much the same condition except that the rigors have ceased. She presents no further physical signs of disease.

The blood cultures in all these cases were made by puncture of a vein in the arm through the skin with a sterile needle after painting the skin with the usual iodine solution. The obvious criticism which might be brought against our findings are that the colon bacilli were contaminations derived from the skin and were not actually present in the circulating blood. We cannot deny the bare possibility of this contention, but maintain that it is extremely improbable. Blood cultures performed in this way by us are almost invariably free from external contamination, and in a very large number of such cultures we have never found the colon bacillus present as a contamination. Further, all these three cases were suffering from an acute infection by the colon bacillus.

We regard these cases as of great interest in that they afford direct evidence that the bacilli are spread by the blood stream and may be there demonstrated. Also our findings suggest a direct relationship between the occurrence of a rigor and the entry of organisms into the blood in considerable numbers.

We hope to be able to produce further evidence upon the question of the spread of the bacillus by the blood in cases of coli infection as well as upon the relationship of blood infection to the rigors, which are so common in these conditions. With these points in view we are continuing our investigations with the assistance of Mr. Kidd.

OBSTRUCTIVE JAUNDICE RELIEVED BY OPERATION.

BY KENNETH H. JONES, M.B., CH.B. VICT.,

STAFF SURGEON, ROYAL NAVY.

THE patient, a man, aged 36 years, was first placed on the sick list on board his ship on Jan. 20th, 1908, but he stated that he had felt unwell for about a month previously. He complained of loss of appetite and of diarrhœa, and was somewhat jaundiced. A physical examination of the liver revealed no increase of dulness on percussion, nor did there appear to be any tenderness on palpation or on deep pressure. The patient, who gave a history of having contracted syphilis some 12 years before, was put on low diet, and iodide of potassium was given in 10-grain doses. He was admitted to Hong-Kong Hospital on Jan. 29th. He was an old-looking man for his years, rather stout, of a melancholy cast of countenance, and deeply jaundiced. A physical examination revealed nothing abnormal in the abdomen or thorax, but he was found to have an unusually slow pulse. The urine was stained with bile, but it contained no albumin. The temperature was 99° F. The patient was evidently much depressed. From Feb. 1st to 10th the jaundice continued to increase, and the chief complaints were mental depression and an intense itching of the skin. On the 15th unusual resistance on deep pressure was first made out in the right hypochondriac region. On the 18th the patient had an attack of nausea and vomiting. The resistance over the situation of the gall-bladder showed an inclination to increase, and in a few days tenderness was found to be present also.

Opinions were divided as to the nature of the condition present, whether due to carcinoma or gall-stones, but the age of the patient and the absence of emaciation were against the former, and the lack of any definite history of biliary colic contra-indicated the latter. It was obvious by

this time that the only hope of relief to the condition was by operative interference, and accordingly, on Feb. 20th, the patient was prepared for laparotomy, and arrangements were made for his removal to the surgical wards. It was found, however, on the next morning, that the urine contained a cloud of albumin, and the operation had to be postponed. On the 27th the patient vomited several times and had a fainting attack. The itching of the skin, which had throughout been a very troublesome symptom, became about this time so severe as to keep him awake at night, in spite of the fact that he was usually inclined to be drowsy. The patient's condition remained almost unchanged and extremely unsatisfactory until March 13th, when, all traces of albumin having disappeared from the urine, it was decided to operate without delay, and he was therefore prepared for an exploratory laparotomy in the usual manner.

The patient was anæsthetised with chloroform. As soon as the peritoneum had been opened a considerable quantity of omentum presented through the aperture. The omentum was pressed back into the abdomen with a hot swab, and two fingers were introduced through the wound of the peritoneum and a digital examination was made. The gall-bladder, the anterior lower border of the liver, and the pancreas were readily distinguished by the finger, but nothing like a gall-stone could be felt. As nothing further could be made out by the finger, and as the incision was too small for a satisfactory visual examination, it was decided to enlarge it. A fresh incision was, therefore, carried from the upper end of the original one and at right angles to it in the direction of the middle-line of the body, dividing the right rectus muscle and its sheath. The original incision was also prolonged in the direction of the right iliac region for two inches further. These incisions were made by inserting two fingers into the abdomen as a director and cutting the parietes with a large pair of scissors. A V-shaped piece of the abdominal wall could now be turned back and the operation area examined with ease. It was at once evident that the gall-bladder was slightly thickened, and also that it was firmly adherent to the great omentum by which it had been dragged forwards and downwards from its normal position. The gall-bladder was freed from all adhesions with a probe, and the common bile-duct was examined and found to be free from any impacted bodies. As nothing more remained to be done, and as the patient was now considerably collapsed, the abdominal wound was closed, the peritoneum edges being approximated by catgut sutures, of which two were also placed in the right rectus muscle. The skin and fasciæ and layers of muscles were united by a continuous suture of silkworm gut to save time, and the patient was returned to bed.

On the day following the operation the patient was much collapsed, but he recovered rapidly from the shock. The wound, unhappily, did not heal by first intention, doubtless owing to the depressed condition of tissues, which for weeks had been saturated with bile. The wound granulated up slowly, several catgut sutures coming away in the irrigation.

In spite of the above-mentioned drawbacks, the condition of the patient improved continually from the date of the operation. In a week a considerable clearing up of the jaundice took place, and in a month almost all traces of icterus had disappeared, and the stools and urine had regained their normal colour. The patient's general health improved rapidly, with increasing appetite and a brighter mental aspect. In six weeks he was completely convalescent.

The temperature had ranged between normal and 99° F. during February, attaining to 100° on the 26th. From that date onward there was a certain amount of fever, the evening temperature being from 100° to 101°. On March 13th, after the operation, the temperature fell to 97·3°, but rose on the next day, and for the rest of the month ranged between normal and 100°, only twice attaining 101°. From this point the temperature became normal.

This case is of interest from the doubtful nature of the condition present prior to operation. Similar conditions are occasionally found during operations undertaken for the removal of gall-stones. In this case the gall-bladder had been drawn downwards and forwards by the adhesions connecting it with the great omentum, and probably a kink had been caused in the common bile duct, occluding its lumen, with consequent jaundice. The patient was seen nearly two years after his discharge from Hong-Kong Hospital and found to be in excellent health.

THE VALUE OF X RAYS IN THE DIAGNOSIS OF TUBERCULOSIS IN CHILDREN.

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AND

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THERE is a class of child about whom a good deal has been written and much discussed—namely, the pale, anæmic child found in schools, who is, in addition, ill-nourished, wasted, and frequently suffers from headache, loss of appetite, and general ill-health. A great number of these children are sent to Queen Mary's Hospital. During the past 12 months we have endeavoured to ascertain what proportion of these children are tubercular, and to discover the presence of a tuberculous lesion at a stage when treatment may be of use, and the disease arrested before the lungs are seriously involved.

The main symptoms of this condition are—wasting, headache, loss of appetite, and a general feeling of tiredness. In addition, there may be frequent fainting attacks (*vide* Case 1). A good many complain of cough, which is usually worse at night. Some have rises of temperature; this may occur frequently in the evening, sometimes independently of any increase in muscular work, but more often after extra exertion at work or play; the rise of temperature is small, commonly to 99°F., and the thermometer never registers above 100°. There is very often a family history of tuberculosis.

On examining these children it was found that, although some showed early signs of pulmonary tuberculosis—e.g., a little impaired resonance with occasional crepitation at one apex—in many the chest was found normal by the usual bedside method of examination. All of them reacted positively to von Pirquet's test.

When the chests were examined by the X rays, it was found that in all the cases there were definite shadows localised to the regions of the roots of the lungs. These shadows varied in intensity and in shape. Some had a tendency to a linear arrangement corresponding to the larger bronchi; the right side more commonly showed a shadow than the left. In some cases there was merely an indefinite mottling. In one case, in addition to general mottling, there was a circumscribed opaque area in the region of the root of the right lung (Case 2). These shadows in the chest were found so frequently that it seemed at first difficult to believe that they were pathological.

It has been difficult to obtain children of the same age who might be presumed to have normal chests. We have succeeded, however, in collecting a number of children of about the same age who were found organically sound by the usual examination, who reacted negatively to the von Pirquet test, and in none of whom any of the above-named symptoms were present. Some of these were healthy lads from the training-ship *Exmouth*, sent to the hospital for surgical treatment for hernia, &c. In none of these were we able to find the shadows in the chest which were present in the cases described.

It seems certain that the X ray appearances above described are produced by disease in the region of the bronchial glands. It is reasonable to suppose that the shadows are due to tubercular lesions, for two reasons. First, shadows were constantly present in the cases who reacted positively to von Pirquet's test, and in whom the general symptoms mentioned earlier were present, and some of whom had signs in the lungs. Secondly, no shadows were found in children who reacted negatively to the same test, and in whom there were no symptoms or physical signs of tuberculosis.

It is extremely difficult to name the exact condition present in any given case, for, indeed, the shadows may be caused by any one or more of the following conditions: (1) enlargement of the bronchial glands—with or without calcification; (2) fibrous thickening around the glands; (3) healed tuberculous foci in that part of the lung near the glands; (4) active tuberculous disease in the same situation as (3). The

differences in the shadows are doubtless due to the varying conditions which may be present. We cannot at present say positively from the appearance on the screen what stage of disease that particular appearance indicates.

Dr. A. C. Jordan [1] maintains that pulmonary tuberculosis commences at the roots of the lungs, and spreads to the apices along the bronchi. He supports his conclusion by comparing results of examination of the lungs after death with X ray shadows produced by those lungs. We have not been able to make post-mortem examinations on cases which have been X rayed, because we only selected early cases. We have, however, frequently performed post-mortem examinations on children dead of advanced, generally acute, tuberculosis, and in a large number it has been possible to trace the spread of a lesion from the bronchial glands directly into the lung. If this can occur so commonly in acute tuberculosis, it is a probable sequence of events in chronic pulmonary tuberculosis. On several occasions in Case 3, who showed a marked shadow at the root of the right lung, crepitations were heard over the right lower lobe near the spine. Each time they disappeared completely in a few days, only to recur after an interval. Is it not likely that the presence of these physical signs was associated with the presence of the shadow, which was on the same side? There were four other cases who for a short period during their stay in hospital had crepitations over a small area of the lung. In Case 3 they were present on the same side as the shadow on the screen.

The recognition of these X ray appearances as pathological and not physiological is of the utmost importance. If the shadows are found when there are no physical signs in the lungs, the case is in an early stage, when treatment may reasonably be expected to be more beneficial than if left till the disease is further advanced and has caused such pulmonary involvement as to be recognised by physical signs in the chest.

The diagnosis of early pulmonary tuberculosis in children is always difficult: physical signs are frequently absent; sputum is difficult to obtain. The X rays have helped us. It is difficult to say whether the lung or only the glands are affected, but the presence of a shadow indicates tuberculosis of one or both. It is unnecessary to make a definite statement which is involved, because the treatment is the same. These children, if left in their slum homes with poor food and worse accommodation, will almost certainly develop pulmonary tuberculosis.

The treatment is a prolonged stay in the open air of the country, with good food. Much benefit is to be derived from sleeping out in the open air. The children should have an open-air school and do a certain amount of supervised physical work, as well as organised games—cricket, football, &c. The temperature should always be taken, and the work and games regulated by the rise caused in individual cases. Absolute rest after meals and after exercise should be insisted upon.

Children treated on the above lines for a long time—at least a year, if possible for a longer period—eventually develop sufficient resistance to prevent the spread of the disease. It is very important that, when discharged, they should return to suitable surroundings, and that suitable work should be found for them. If treatment is continued for only one or two months, and at the end of that short time the children return to slum houses and bad food, relapse is very liable to occur.

The following is an account of our results: Cases investigated, 28. Aged from 7 to 16. Von Pirquet's reaction positive in all. Cough present in 13; markedly worse at night in 6 of these; no cough in 15. Temperature: Raised in 15, normal in 13. Bedside examination of lungs: No signs at any time in 16, signs constantly present in 7, occasional signs (see text) in 5; total 28.

The following are the X ray results. Shadows at roots of both lungs: right and left lungs equally, 13; right lung more than left, 4; shadow at root of right lung only, 8; shadow at root of left lung only, 3; total, 28.

Three cases had tubercular glands in the neck, 2 cases had lupus vulgaris, 2 cases had chronic otorrhœa, which may have been of a tubercular nature, and 1 case had occasional attacks of dyspnœa, resembling asthma. The average duration of stay in hospital was—11 cases which have gone home, 11 months; 17 cases still in the hospital, 8½ months.

[1] THE LANCET, August 24th, 1912, p. 518.

The following cases, mentioned in the text, are described in detail:—

CASE 1.—A boy, age 14, anæmic and thin. Von Pirquet positive; no temperature and no cough. For a short time, when first observed, there were crepitations at the left base. These signs rapidly disappeared and did not recur. The X ray screen showed marked shadowing at the root of the left lung. Before admission and while in hospital had fainting attacks; the heart was normal. Was discharged after ten months' treatment, and after three months symptoms recurred and he was admitted again and was discharged about six months later, about one month ago. So far he has kept well.

CASE 2.—Patient, age 13. Von Pirquet positive, no cough, no temperature, no signs in lungs. Had large caseous glands removed from both sides of neck while in the hospital. The X ray screen showed a circumscribed opaque area, probably a caseous gland in the region of the right lung.

CASE 3.—A boy, age 13. Very thin and marked bronzing of skin. Occasional cough, occasional rise of temperature to 99°. X ray screen showed marked shadow at the root of the right lung. He was in the hospital for 18 months, and during that time, on several occasions, crepitations were heard over the right lower lobe near the spine; they were heard for only a few days at a time, and then completely disappeared for a few months, recurring again in the same position, at varying intervals. There was no change in the symptoms while these signs were present.

The patient in Case 3 is still under treatment.

TRANSMISSION OF POLIOMYELITIS BY MEANS OF THE STABLE FLY (STOMOXYS CALCITRANS).

BY JOHN F. ANDERSON,
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AND
WADE H. FROST,
PASSED ASSISTANT SURGEON, UNITED STATES PUBLIC HEALTH SERVICE.

As a result of the thorough epidemiologic studies of poliomyelitis conducted by the Massachusetts State Board of Health from 1907 to 1912, under the direction of Dr. Mark W. Richardson, secretary of the Board, evidence was collected which led us to strongly suspect that the common stable fly (Stomoxys calcitrans) played an important part in the spread of this disease.

At the joint session of Sections I. and V. of the Fifteenth International Congress on Hygiene and Demography in Washington, Sept. 26th, 1912, Dr. Milton J. Rosenau, of the Harvard Medical School, who has been working in conjunction with the Massachusetts State Board of Health, announced the result of an experiment which seemed to confirm most strikingly the inferences drawn from the epidemiologic work above mentioned. Dr. Rosenau stated that he had infected several monkeys with poliomyelitis by intracerebral inoculation, exposed them daily—from the time of inoculation till death—to the bites of several hundred stomoxys, at the same time exposing 12 fresh monkeys to the bites of the same flies. At the time the announcement was made 6 of these 12 monkeys were reported as having developed symptoms characteristic of poliomyelitis—i.e., illness followed by more or less extensive paralysis. Of these 6 monkeys 2 had died, 3 were paralysed at that time, and 1 recovered after a brief illness. In the cord of one of the monkeys that had died were found the characteristic lesions of poliomyelitis—that is, perivascular infiltration and destruction of the motor cells of the anterior cornu. The cord of the other monkey was reported to have shown changes less characteristic of poliomyelitis—namely, degenerations of the motor cells without perivascular infiltration. At the time of announcement a sufficient interval had not elapsed to determine the result of the attempt to transmit the infection to other monkeys by inoculation with the cord of one of the two that had died. This experiment, giving an altogether new direction to the experimental study of poliomyelitis, appeared of sufficient importance to warrant an immediate attempt at confirmation.

It has been our object to repeat, as nearly as possible, the conditions of the experiment reported by Dr. Rosenau, and we are indebted to him for assistance and advice in the details of the experiment. On Oct. 3rd rhesus No. 242 was inoculated intracerebrally with an emulsion of the cord of a monkey which had died from poliomyelitis. The virus used is a strain originally obtained from the Rockefeller Institute for Medical Research, kept at the Hygienic Laboratory for nearly two years, during which time it has been passed

through a large series of monkeys. Two hours after inoculation the infected monkey was exposed to the bites of about 300 stomoxys recently collected in Washington. Thereafter until death, on Oct. 8th, this animal was exposed daily for about two hours to the bites of the same flies, plus additional fresh stomoxys added from time to time as caught. This monkey (No. 242) developed characteristic complete paralysis on the afternoon of Oct. 7th and died at 2 A.M. on Oct. 8th. Another monkey (rhesus No. 246), similarly inoculated on Oct. 5th, was then exposed daily to the bites of the same flies, beginning on Oct. 7th. This monkey developed paralysis on the morning of Oct. 9th, soon becoming completely paralysed and dying that afternoon. Thus, from Oct. 4th to 9th, inclusive, the flies used had access to two monkeys inoculated with poliomyelitis, first, rhesus No. 242, then rhesus No. 246. It may be noted that the incubation period in both these monkeys was very short—four days from inoculation to the development of paralysis.

Beginning Oct. 4th, two fresh monkeys (rhesus No. 243 and Java No. 241) were exposed daily for about two hours to the bites of these same flies; and beginning Oct. 5th a third fresh monkey (rhesus No. 244) was similarly exposed. All three of these animals subsequently developed symptoms of poliomyelitis, as follows: Java No. 241 was found completely paralysed on the morning of Oct. 12th, and died a few hours later. At necropsy tubercles were found in the lungs, liver, and spleen. Rhesus No. 244 showed paralysis of the hind legs on the same day (Oct. 12th), but was, nevertheless, exposed again to the bites of the stomoxys from 10 A.M. till 2 P.M. At 3 P.M. the animal, being almost completely paralysed, was chloroformed. At necropsy tubercles were found in the lungs, liver, and spleen; however, apparently not sufficient to have been the cause of death. Rhesus No. 243, which had appeared well on the morning of Oct. 13th, was found at 4 o'clock that afternoon to have a partial paralysis of the right hind leg. The following morning the hind legs and right fore leg were almost completely paralysed. By 3.30 P.M. the neck also was paralysed and the intercostal muscles somewhat affected. The animal was then chloroformed. At necropsy the internal organs appeared normal, except the spinal cord, which was œdematous, the grey matter being congested. Sections of the cord, histologically examined, showed typical well-marked lesions of poliomyelitis, perivascular round-cell infiltration, foci of dense infiltration in the grey matter of the anterior horn, and destruction of some of the motor neurons. The histologic examination of the cords of monkeys Nos. 241 and 244 has not yet been completed, but it it believed, on the clinical evidence, that they died from poliomyelitis.

To summarise, three monkeys exposed daily to the bites of several hundred stomoxys, which at the same time were allowed daily to bite two intracerebrally inoculated monkeys, developed quite typical symptoms of poliomyelitis eight, seven, and nine days respectively from the date of their first exposure.

In order to confirm the diagnosis of poliomyelitis in rhesus No. 243, 1 c.c. of an emulsion of the cord of this monkey was injected intracerebrally on Oct. 14th into a healthy monkey (rhesus No. 250). This animal recovered promptly from the operation and remained apparently quite well till the morning of Oct. 17th, when a partial paralysis of the right fore leg was noted, progressing somewhat during the day. On the morning of Oct. 18th both fore legs were completely paralysed and the hind legs weak. In the afternoon of the same day the right hind leg was completely paralysed, the left very weak, and the neck paralysed. The monkey died at 10.30 P.M., and was immediately placed on ice until necropsy could be made at 9 A.M. on Oct. 19th. At the necropsy there was found some congestion of the lower lobe of both lungs, most marked on the left side, upon which the animal had been lying after paralysis developed. The meninges of the cord were markedly congested. On section, the cord appeared œdematous and the grey matter congested, showing minute hæmorrhages. The site of inoculation appeared normal except for a slight clot. Cultures from this site have shown no growth. The other organs were normal in appearance. Histologic examination of the cord showed lesions characteristic of poliomyelitis, intense congestion and perivascular infiltration, foci of round-cell infiltration here and there in the grey matter, destruction of the cells of the anterior cornu, and small hæmorrhages in the anterior and posterior cornu.

These results, in confirmation of those announced by Dr. Rosenau, would seem to demonstrate conclusively that poliomyelitis may be transmitted to monkeys through the agency of the stable fly (Stomoxys calcitrans). It remains for further work to decide whether this is the usual or the only method of transmission in nature.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF APPENDIX ABSCESS IN A HERNIAL SAC.

BY H. W. WEBBER, M.S., M.D. LOND., F.R.C.S. EDIN.,
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THE presence of the appendix in a herfiial sac is not uncommon, and it has even been found on the left side, but an appendix abscess is, as far as I can ascertain, decidedly rare. The following are the notes of the case.

A man, aged 80 years, was admitted on Sept. 29th, 1912, with a painful, tender, elongated swelling in the right groin, his temperature being 99° F. and pulse 82. He had been ill for three days with pain in the right inguinal region and the development of a swelling extending from the external ring downwards to the scrotum.

On admission he was immediately anæsthetised and an incision made into the swelling, which was found to be of inflammatory nature, extending downwards to and apparently involving the testicle. On deepening the incision two or three drachms of thick pus were found. The nature of the condition of things not being apparent, it was decided to remove the testicle and cord with the thickening involving them complete, and on dissecting up the cord it was found that the appendix was present in the middle of the mass and was the source of the pus. Its base was, therefore, divided and inverted in the cæcum in the usual manner, the inflammatory mass and testicle removed, and the inguinal canal closed with catgut mattress sutures. A drainage-tube was inserted and brought out through the scrotum. The healing of the wound was somewhat delayed by the infection of the tissues which necessarily had taken place, but was finally completed by Oct. 21st.

Plymouth.

A CASE OF KELOID OF THE EYELIDS ASSOCIATED IN ITS ONSET WITH MEASLES.

BY JAMES ALEXANDER WILSON, M.D. GLASG.,
ASSISTANT SURGEON, OPHTHALMIC DEPARTMENT, ROYAL INFIRMARY, GLASGOW.

A BOY, aged 4 years, was admitted to Belvidere Fever Hospital on March 14th, 1912, suffering from measles. The illness is said to have begun on the 6th with the usual symptoms—sneezing, sore eyes, &c. Dr. J. J. Sinclair, resident assistant physician, reports: "The condition on admission was as follows:—Left eye: eyelids greatly swollen, so that they could only be opened with difficulty. Both eyelids and the upper part of the cheek were raw, as if from the application of an irritant. The conjunctiva was chemotic and there was a purulent discharge. The right eye showed the same condition, but it was less marked." On April 9th there is a note as follows: "For the past three or four days the patient has opened the right eye voluntarily. The left eye is still kept closed and no proper view can be obtained; the conjunctiva, however, is congested and some opacity of the cornea is seen." The patient seems to have progressed favourably, and on dismissal the parent was recommended to seek advice at an eye hospital."

The boy was brought to the Ophthalmic Institution on July 1st, 1912, and came under my care. There is a horizontal band 1 inch in length along the right upper lid. It is red, raised, and looks like a scar produced by a recent burn.

There are one or two small round patches on the right cheek and one on the right ear just behind the meatus externus. The left eyelids are much worse than the right. There is a red, fleshy-looking band which begins at the inner canthus and curves outwards in the upper lid. It sends three short arms upwards into the eyebrow, and there is some irregular scarring at the outer part of the lid. On the lower lid there is a band 1¼ inches long extending from the cheek upwards and outwards to the outer canthus, connecting with the scarring on the upper lid. There is also a band

Reproduction of photograph of the patient.

which curves round the inner canthus and connects the bands on the upper and lower lids. These bands are somewhat lumpy and draw the surrounding skin towards them. The upper lid is thickened, contracted, and slightly everted, so that there is difficulty in raising it to get a good view of the eyeball. There is a white opacity on the lower part of the cornea and some discharge from the conjunctiva. No very active treatment has been adopted, but the condition is improving. It is probable that this unusual condition was caused by the inflammation of the eyes that accompanies measles, acting on structures already irritated and abraded.

Glasgow.

THE HOUSING AND TOWN PLANNING ACT AT YEOVIL.—Under the Housing and Town Planning Act the Yeovil town council is building 150 houses, at an estimated cost of nearly £20,000; 50 houses will be erected this year, 50 more in 1913, and the remainder later on. There will be three types of houses, one type being let at 5*s.* weekly, another type at 4*s.* a week, and the third variety will consist of blocks of tenements. Each block will have four flats, with two rooms in each, and offices, staircases, &c., in common. Each house contains a living room, scullery, coal-store, and three bedrooms, while there is a piece of garden at the back. The cost of each house is £136 16*s.* 8*d.* Ten of the 5*s.* weekly houses are completed, and four of the flats are nearly ready. Several tenants are waiting for them. The Yeovil town council is to be congratulated on the undertaking. The Right Hon. John Burns, President of the Local Government Board, recently visited Yeovil, and in the presence of a large gathering formally opened the first cottage.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

SECTION OF THE HISTORY OF MEDICINE.

Election of Officers.—A Down Survey Manuscript of William Petty.—Contributions from History of Medicine to Problem of Transmission of Typhus.—Contemporary Portraits of John Banister and William Harvey.—Exhibition of Italian Diplomas.

THE inaugural meeting of the Section of the History of Medicine was held in the West Hall of the Royal Society of Medicine on Nov. 20th. The chair was taken by Sir FRANCIS CHAMPNEYS, Bart., President of the society, who declared the section duly constituted.

The section proceeded to elect the following officers:—President: Sir William Osler, Bart. Vice-Presidents: Sir T. Clifford Allbutt, K.C.B., Dr. Richard Caton, Sir William S. Church, Bart., K.C.B., Sir Henry Morris, Bart., and Sir Ronald Ross, K.C.B. Honorary Secretaries: Dr. Raymond Crawfurd and Mr. D'Arcy Power. The following were elected Members of Council: Sir Francis Champneys, Bart., Dr. S. G. Clippingdale, Dr. J. D. Comrie, Mr. Alban Doran, Dr. David Forsyth, Dr. James Galloway, Dr. Leonard G. Guthrie, Mr. E. Muirhead Little, Dr. R. O. Moon, Sir Shirley F. Murphy, Dr. J. A. Nixon, Mr. Herbert S. Pendlebury, Dr. H. D. Rolleston, Dr. F. M. Sandwith, and Dr. A. F. Voelcker.

Sir FRANCIS CHAMPNEYS inducted Sir WILLIAM OSLER into the chair, who opened the proceedings with a few words upon the objects of the section and afterwards read his paper on a Down Survey Manuscript of William Petty. He said: Sir William Petty (born 1623, died 1687), for a short time professor of anatomy in the University of Oxford and Vice-Principal of Brasenose College, has outlived the somewhat slender reputation he had in the profession, and yet in one particular he deserves to be held in remembrance among us for his share in Graunt's "Bills of Mortality of the City of London" (1661), the first work of the kind in English, and for his "Observations on the Dublin Bills of Mortality" (1683). As a political economist his praise is in the schools. In the "Treatise on Taxes and Contributions" (1662), the "Discourse on Political Arithmetic" (1690), the "Political Anatomy of Ireland," and in certain minor tracts students find the beginnings of that science in these islands. Before Petty no one had tried accurately to estimate the money value of the individual life to the nation, the importance of the division of labour, and the real nature of wealth. Let me quote one sentence from "Verbum Sapienti" (from the 1691 edition, p. 14):—

> For Money is but the Fat of the Body-Politick, whereof too much doth as often hinder its Agility, as too little makes it sick. 'Tis true, that as Fat lubricates the motion of the Muscles, feeds in want of Victuals, fills up uneven cavities, and beautifies the Body; so doth Money in the State quicken its Action, feeds from Abroad in time of Dearth at home; evens accounts by reason of its divisibility, and beautifies the whole, although more particularly the particular persons who have it in plenty.

You will not wonder that the Cambridge University Press reprinted his economic works in 1899 (edited by C. H. Hull) when you hear the following extract from Lord Edmund Fitzmaurice's "Life," 1895:—

> In the "Treatise on Taxes," with an eye still fixed in the same direction, he begins by pointing out that the only legitimate public charges of the State are, its defence by land and sea, so as to secure peace at home and abroad and honourable vindication from injury by foreign nations; the maintenance of the chief of the State in becoming splendour, and of the administration, in all its branches, in a state of efficiency; "the pastorage of soul by salaried ministers of religion;" the charge of schools and universities, the endowment of which, in his opinion ought to be a concern of the State, and the distribution of whose emoluments ought not to be "according to the fond conceits of parents and friends," and of which one of the principal aims should be the discovery of Nature in all its operations; "the maintenance of orphans, the aged, and the impotent," for, in his opinion, "the poor can lay up nothing against the time of their impotency and want of work, when we think it is just to limit the wages of the poor"; and the improvement of roads, navigable rivers, bridges, harbours, and the means of communication, and the development of mines and collieries.

But Petty has a third claim to remembrance as the author of the famous Down Survey of Ireland—which "stands to-day, with the accompanying books of distribution, the

legal record of the title on which half the land of Ireland is held." (Larcom.) The text of my few remarks is an interesting manuscript relating to this work which chance threw in my way. In 1649 Petty had been named deputy to Dr. Clayton, the then Regius professor of medicine at Oxford, and in 1651 succeeded him in the chair of anatomy. At Oxford he became an active member of the club or society out of which originated the Royal Society. In 1652 he was appointed Physician General to the Forces in Ireland, with which country the remainder of a stormy life was to be associated. A masterful, energetic, resourceful man, the first thing he did was to reorganise the medical service. Energy in action was, he said, the great requisite of life, and soon an opportunity offered which called forth all his powers. In 1652 the Irish were conquered, the English won, and, as Petty says, "had amongst other pretences a Gamester's right at least to their Estates." The claimants were (1) the adventurers in England to whom 2,500,000 acres of Irish land had been pledged for money advanced to raise an army; (2) the soldiers of the new model army of Cromwell and Fairfax, who had really done the fighting; and (3) the Commonwealth, which had reserved the Crown and Church and certain other lands. There were, it is said, 35,000 claimants of land in all. Lots were drawn, and attempts were made at the distribution, but it was found impossible to identify the lot drawn with any particular parcel of land. There was no survey, and matters were soon in a hopeless muddle. The surveyor-general, also a doctor, a visionary, unpractical man, insisted that a survey could not be made in less than 13 years. Petty, a strong critic of this scheme, undertook to finish the job in 13 months, if given a free hand. Registers and valuation lists existed in places, but no maps; Petty agreed "to survey, admeasure and to map," and so his work came to be known as the "down" survey, because it was surveyed *down* on a map. The date fixed was Feb. 1st, 1655, and the rate of payment agreed upon was £7 3*s*. 4*d*. per 1000 acres of forfeited profitable land, and the Church and Crown lands at £3 per acre. It was a vast undertaking, but Petty had a genius for organisation, and was himself a practical surveyor as well as a mathematician and physicist of the first rank. We get a glimpse of the way he went to work from a contemporary account:—

> The said Petty, considering the vastnesse of the worke, thought of dividinge both the art of makinge instruments as alsoe that of usinge them into many partes, viz., the one man made only measuringe chaines, vizt. a wire maker: another magneticall needles, with theire pins, vizt. a watchmaker; another turned the boxes out of wood, and the heads of the stands on which the instrument playes, vizt., a turnor; another the stands, or leggs, a pipe maker; another all the brasse worke, vizt., a founder; another workman, of a more versatile head and hand, touches the needles, adjusts the sights and cards, and adaptates every peece to each other.

In the meantime scales, protractors, and compass cards were prepared by the ablest artists in London, whither also were sent for, to use the old expression, "a magazine of royal paper, mouth-glue, colours, pencils," &c. Field-books were prepared, and the ablest men in each barony and parish were selected as helpers. A staff of 1000 persons was organised, with 40 clerks at headquarters and an army of surveyors and undermeasurers. By April, 1656, the greater part of the special work assigned was finished, and he had surveyed for the army about 3,500,000 acres. Subsequently he undertook the survey of the adventurers' lands, a task which occupied his time until nearly the end of 1658. As Sir Thomas Larcom, the historian of the survey, remarks: "It is difficult to imagine a work of more obscurity and uncertainty than to locate 32,000 officers, soldiers, and followers with adventurers, settlers of every kind and class, having different and uncertain claims on lands of different and uncertain value, in detached parcels sprinkled over two-thirds of the surface of Ireland." But this is the task Dr. Petty successfully accomplished. The MS. which I show deals with the survey, and was bound at the back of two volumes of Petty's letters, which I bought at the sale of the Phillips MSS. in April, 1911. The numerous manuscripts relating to the survey are in the possession of the Lansdowne family (descendants of Petty), in the British Museum, and in the Public Record Office in Dublin. This manuscript has two points of interest: a copy in Petty's hand of the contract, dated Dublin, May 18th, 1655, signed by Charles Fleetwood on behalf of the Council of Officers. This has already been published in Larcom's book. But the greater portion of the MS. is occupied with private memoranda concerning the detailed cost of the work of the survey. These, I am informed by Mr. Mills of the Public Record Office, Dublin, "have not been known to Sir Thos. Larcom Hardinge, or Lord Fitzmaurice when writing on Petty's work. They should be of interest to any future writer on Petty's life or his great work." In reading Petty's life and works one gets the impression of a man born out of due time. His ideas, and the practical capacity and energy with which he carried them into execution, suggest the twentieth rather than the seventeenth century. No one of his writings shows the man in a better light than a little tractate on education ("Advice of W. P. to Samuel Hartlib for the Advancement of Some Particular Parts of Learning." London, 1648). He suggests the establishment of "ergastula literaria," literature workshops where children may be taught to do something towards their living as well as to read and to write; and he would have all children, though of the highest rank, do "some gentile manufacture in their minority." He also urged the establishment of a college of tradesmen—a technical school, "gymnasium mechanicum"—"to which one prime and ingenious workman of each trade should be appointed a Fellow." Of special interest is his advocacy of a "Nosocomium Academicum," or a hospital to cure the infirmities both of physicians and patients. It is the first suggestion I know of a research hospital. And he lastly urges the formation of a society, which will be "as careful to advance arts as the Jesuits are to propagate their religion"—which indicates that he had in mind at that time the organisation of the Royal Society. Pepys, in the celebrated diary, has many notices of Petty, who, he says, "in discourse is methinks one of the most rational men that ever I heard speak with a tongue, having all his opinions most distinct and clear"—judgment amply confirmed by all those who have studied the workings of this remarkable man.—Mr. W. G. SPENCER, in congratulating the President on his paper, referred to the incident which occurred whilst Petty was lecturing on anatomy at Oxford in 1650, when Anne Green, a maid-servant, insufficiently hanged, was brought for dissection and resuscitated. The story is told at length by Anthony Wood.

Dr. RAYMOND CRAWFURD read a paper entitled "Contributions from the History of Medicine to the Problem of the Transmission of Typhus," with the purpose of showing that, apart from the discovery by experimental pathology, the history of recorded epidemics supplied all the data for reaching the correct conclusion as to the part played by body lice in its transmission. He argued that as the flea and the body louse tend to flourish under closely similar conditions, one would expect to find considerable similarity in the epidemicity of plague and typhus fever, but with differences corresponding to any differences of habits of life of the two parasites. He adduced a volume of evidence to show that epidemics of typhus and plague did habitually concur in former times, and also epidemics of typhus and relapsing fever. This latter association would be inevitable, seeing that it is now known that relapsing fever is also communicated by body lice. The constant association of various acute infectious fevers explained how it was that physicians came to the conclusion that they all represented merely stages of a single morbid process, with no differences in kind. But though thus closely associated, the tendency in European epidemics had consistently been for typhus to precede plague, and sometimes to follow it as well. European epidemics of plague had almost invariably reached their highest virulence in the summer when flea prevalence is at a maximum; but European epidemics of typhus had almost always been most severe in winter, when the habitation of the body louse is least disturbed by washing and changing of clothing and when the desire for warmth induces overcrowding, with increased facilities for the transmission of the parasite. Of the rôle of clothing in the carriage of typhus there was no doubt whatever. Perhaps the scantiness of clothing was a subsidiary cause of the absence of typhus in Tropical Africa, and it was interesting to note that several writers a century or more ago had noted the immunity to typhus of naked slaves on ships in which typhus raged among those who wore clothing. Murchison and others had shown that the prevalence of typhus in a district was directly proportional to the overcrowding and the destitution of the residents; and, contrariwise, that there was no tendency, except in abnormal circumstances, such as warfare, for it to spread to districts in which overcrowding and uncleanliness did not exist. In this feature

typhus contrasted strongly with measles and scarlet fever. Typhus had so constantly attached itself to camps and armies that it bore numerous synonyms indicating the fact. Many armies and many beleaguered cities had been terribly devastated by typhus. The Crimean war supplied striking testimony to the part played by lice. In the first year the medical officers stated that the English troops were infested with lice, and typhus also raged among them, until fresh clothing arrived for the troops. In the second year the French were the chief sufferers from lice and also from typhus. Letters were read from Crimean medical veterans substantiating these facts. In the South African and Soudanese campaigns both officers and men were infested with lice, but in the absence of the hypothetical causal micro-organism, typhus did not appear. Drastic treatment of pediculosis should be a cardinal feature of military hygiene. The constant appearance of typhus in gaols, of which many instances were cited, in the absence of typhus in the district, led medical men to believe in its generation *de novo* in prisons. The true explanation probably lay in the presence of infected body lice or their ova in the prison clothes and bedding that were used by successive relays of prisoners. It has been recently shown that the infection can be transmitted to the ova. This, however, does not suffice to explain such an outbreak as that in Strasburg gaol in 1854, in the absence of typhus in the district, and after an interval of 40 years, unless the audacious hypothesis is advanced that infected ova may have lain dormant for 40 years and become revivified under appropriate conditions. The hypothesis of typhus carriage might be suggested, but that could not well explain five outbreaks that occurred on the French convict hulks at Toulon between 1820 and 1856, when there was no typhus in or around Toulon. Typhus had shown the same liability, in a less degree, to break out in hospitals as it had done in gaols and ships, and in this connexion it was interesting to find that in a recent epidemic in N.W. India a careful examination of the bedding disclosed the presence of numerous ova of the body louse. With the relationship of typhus to the body louse confirmed it was unpleasant to reflect that in past times the British Isles had been regarded as the favourite haunt of typhus. The much-travelled Erasmus had, however, awarded the palm to England for "the filthiness of the streets and the sluttishness within doors," and Stuart literature told the same tale. It was not for the reader of the paper to suggest why typhus had continued to flourish in Ireland after it had disappeared from the sister islands. Murchison had actually noted the verminous condition of the occupants of a house, in which a sporadic case of typhus appeared, but it did not occur to him that there was a direct relation between the two.—The paper was discussed by Dr. L. W. SAMBON and Dr. F. M. SANDWITH, each of whom adduced evidence from their own experience in support of the general thesis of the paper.

Mr. D'ARCY POWER read notes on a Contemporary Portrait of John Banister delivering the Visceral Lecture at the Barber-Surgeons' Hall in Monkwell-street in 1581. He pointed out how many additional facts it furnished both about the lecturer and the teaching of anatomy in London in the sixteenth century. He also showed a contemporary portrait of Dr. William Harvey at the age of 61. Both portraits he thought had been painted by the Serjeant Painter to the Court for the time being, and a copy of each was given to the members present.

Dr. MICHAEL FOSTER exhibited two Italian Diplomas to show how closely they resembled Harvey's diploma at the College of Physicians. One diploma was issued at Padua in 1714 to Augustin Rossi as Doctor of the Canon and Civil Law; the other was a licence to practise surgery granted to Laurentius Maria Saura and dated Venice 1755.

SECTION FOR THE STUDY OF DISEASE IN CHILDREN.

Exhibition of Cases and Specimens.—Epidemic Catarrhal Jaundice.

A MEETING of this section was held on Nov. 22nd, Mr. A. H. TUBBY, the President, being in the chair.

Dr. J. L. BUNCH showed a Congenital Syphilitic Infant treated by intravenous injection of neosalvarsan. The child, a girl 2 years old, had been suffering from an offensive muco-purulent discharge from the nostrils, malnutrition, and well-marked condylomata round the anus. The Wassermann reaction had been markedly positive, and on Oct. 30th she was given a dose of 0·45 grm. neosalvarsan intravenously into the median basilic vein. No ill-effects of any kind followed the injection. The child left the hospital two days afterwards with the syphilitic symptoms greatly improved, and a week afterwards the condylomata and muco-purulent rhinitis had disappeared. On Nov. 13th a second injection of neosalvarsan was given, this time intramuscularly into the right buttock. The amount of neosalvarsan so injected was again 0·45 grm. The child had steadily improved in general health and had put on weight. The Wassermann reaction was negative.

Dr. J. WALTER CARR showed a case of Partial Hemiatrophy of the Face and Tongue; boy, aged 9 years. About a year ago the patient's mother first noticed a whitish spot, like a scar, over the lower border of the lower jaw on the right side. Since then a gradual wasting of the lower part of the right side of the face had been observed. No cause could be assigned for the onset of the atrophy; there was no history of illness or of trauma. When shown there was marked atrophy of the skin, subcutaneous tissues, and muscles over and below the right half of the lower jaw, from the angle to the symphysis. The bone itself also appeared to be somewhat wasted, but an X ray examination did not show any definite atrophy. The skin showed slight, rather patchy atrophic changes; its sensibility was unaltered, except, perhaps, for a very slight diminution to touch. The muscles contractednormally; those of mastication were not affected. There was marked atrophy also of the right half of the tongue, but no affection of movement, ordinary sensibility, or taste. In all other respects, except for slight psoriasis, the boy seemed quite normal, both physically and mentally.

Mr. LIONEL E. C. NORBURY showed a case of Spina Bifida (Meningo-myelocele) treated by operation. The girl, when aged 5 weeks, was admitted with an ulcerating sacra spina bifida the size of a large Tangerine orange. There was very little true skin over the swelling, the covering consisting chiefly of a thin membrane, discharging in several places. There was a slight degree of hydrocephalus; talipes calcaneus bilateral; no other paralyses. After the ulcers had healed an operation was performed under chloroform anæsthesia of excision of the spina bifida by elliptical incisions. A rubber tube was stitched into the rectum to avoid soiling of the wound, but did not remain in position very long. The child was kept in a slanting position with the head low until the wounds had healed. There was never any leakage of cerebro-spinal fluid during convalescence The child was 16 months old when shown. She was intelligent The anterior fontanelle was almost closed. There was no bulging in the region of the wound. The condition of talipes calcaneus remained, and was being treated by massage and passive movement by the mother.

Mr. H. A. T. FAIRBANK showed a case of Ununited Fracture of the Neck of the Femur. The patient, a girl, aged 15, gave a history of having been knocked down and run over by a van in October, 1904. The diagnosis was said to have been "comminuted fracture of the femur near the neck." The left leg had always been short since the accident, which necessitated her lying in bed many weeks. The shortness was said to be increasing. Pain had been present at times only, but had been worse lately. The pain was severe at night, it waked her; it was particularly noticeable on rising after sitting for long, but it was not caused by walking, except in wet weather. The left leg was wasted, and held in an everted position. Flexion of the hip was possible to a right angle only; abduction was practically abolished, while internal rotation was very limited; extension and adduction were only slightly affected. The trochanter was raised, prominent, and thickened anteriorly. Real shortening, 2 in. A skiagram showed an ununited fracture of the neck of the femur and coxa vara. The case was shown in order to elicit opinions as to the best treatment. It was proposed to excise the head of the femur, and retain the limb in hyper-abduction for several weeks.

Dr. ERIC L. PRITCHARD and Mr. DOUGLAS DREW showed a case of Œsophageal Stricture. The patient was a boy, aged 2 years, delicate from birth and subject to vomiting, and was admitted owing to inability to swallow solid food. He had been fed on liquid foods until recently, when inability to swallow solids was discovered. X ray photograph showed a dilated œsophagus between the level of the suprasternal notch and xiphisternum and a stenosed portion below.

Dr. ERIC PRITCHARD also showed a case of Multiple Exostoses with Wasting of the Muscles of Upper Arm. The patient was a boy, aged 9 years. The first exostosis was noticed at the age of 2 years on the inner side of the upper end of the tibia. From that time until the present new exostoses had continued to develop, and were exceedingly numerous, especially in the ribs. For the most part they were symmetrical. There was considerable wasting of the muscles of the upper arm, but muscular power was good.

Mr. SIDNEY BOYD showed a case of Osteoma of the Forearm causing considerable deformity. A boy aged 9 years. The tumour of the forearm appeared to be growing from the ulna, and had caused considerable bowing of the radius. It was first noticed at the age of 5 years. The head of the radius was dislocated outwards. There was imperfect ossification of the lower end of the ulna, and a small tumour at the upper end of the same bone. He had also several osteomata on the ribs, one at the upper end of the right humerus, and one on the vertebral border of the left scapula. His father was said to have a bony tumour of the tibia. Boy was the ninth of 11 children. An elder brother, aged 19 years, had a similar but smaller tumour of the forearm; it was said to have become much smaller, and caused no loss of function. Another brother, aged 15 years, had a similar tumour, but it caused him very little inconvenience in his work. A sister, aged 6 years, had multiple osteomata.

Dr. G. A. SUTHERLAND showed a case of Cerebral Non-development. A girl aged 7 weeks. When aged 2 weeks convulsions came on in the form of irregular twitchings of face and limbs. Difficulty in swallowing was noticed. The breathing at times was rapid. The baby was fairly well nourished, the skull and other parts of the body appearing to be proportional in size. She lay in a completely apathetic condition, without smiling or taking any notice when awake, but could be aroused to make certain gross movements of the trunk and limbs, although insensitive to pin-pricks. There was marked opisthotonos, with a tendency to left-sided pleurothotonos, and the limbs were in a spastic condition, flexion being present at the elbows and extension at the knees. The hands and feet were in a condition of tetany. Other symptoms: (1) As a rule unable to suck or swallow; (2) attacks of tachypnœa, the respirations running up to 160 per minute, and being cyclic in character; (3) attacks of tachycardia, the heart-rate running up to 200 per minute; (4) fits of crying, causeless, beginning and ending abruptly; (5) spells of yawning; (6) occasional twitching about the face and hands, but no definite convulsive seizure. Fundi normal. Wassermann test negative. Cerebro-spinal fluid scanty but normal; temperature normal. It was suggested that the underlying condition was one of non-development of the cerebral lobes, and that only the cerebellum, pons, medulla, and basal ganglia were active. The uncontrolled action of these lower centres would explain most of the symptoms present.

Mr. H. S. CLOGG showed a case of Malformation of the Rectum (complete absence of the post-allantoic gut and the proctodæum); operation; result. A boy aged 4½ years. When 5 days old he was admitted to the Evelina Hospital. The abdomen was greatly distended; vomiting was frequent; there was entire absence of development of the proctodæum, without any indication where the bowel terminated. Immediate colostomy in the left iliac region was performed. When he was 6 months old an exploratory operation was performed from the perineal aspect. The bowel ended blindly at the level of the base of the prostate gland, to which it was adherent; it was separated from the prostate and sufficiently mobilised to enable it to be brought to the perineal skin without tension, to which, after opening, it was sutured. To render access easier a portion of the coccyx was removed. In order to mobilise the bowel the peritoneum had to be freely incised, and several resistant peritoneal and connective tissue bands had to be severed. The wound healed satisfactorily without any retraction of the bowel. The colostomy was closed later. When shown the bowel was seen to be united to the skin of the perineum; there was no stenosis nor prolapse; the motions were passed unconsciously; there was complete absence of sphincteric control. The case was shown to illustrate: (1) the advantages of an immediate primary colostomy over a perineal dissection in cases where the bowel ends at some distance from the perineum, for a deep perineal dissection in an infant a day or two old suffering from obstruction must be extremely difficult and probably fatal; (2) that in order to establish a perineal anus the bowel must be freely mobilised and brought to the perineal skin without tension, or very troublesome stenosis will result; and (3) the absence of sphincter control which is to be anticipated, since the sphincters are developed from the proctodæum. In this case there were a few fibres in the position of, and having the direction of, the external sphincter muscle, but as a muscle it could not be said to be developed.

Dr. O. K. WILLIAMSON showed a Case for Diagnosis. The patient, a boy aged 10 years, was brought to the hospital in April, 1912, on account of tremor of the head. The illness began three and a half years before this, when it was noticed that his hands trembled and that he had lost strength in them. After this a fine tremor was noticed in the head. Since this time he had been, on the whole, less bright mentally. He got more easily excited than before, was spiteful and unsteady since the beginning of the illness, and frequently fell. He had fits of bad temper. Since the beginning of the illness his sight had been affected and his gait unsteady. He improved for a time, but had been worse again of late. There were coarse tremor of the arms, equal on the two sides, also of the tongue; fine tremor of the head; gait ataxic and reeling; he tended to fall to the left side; Romberg's sign was absent; pupils reacted well to light and accommodation; hearing normal; doubtful slight lateral nystagmus; knee-jerks normal, no definite plantar response; and speech indistinct.

Dr. J. D. ROLLESTON exhibited a Pharynx and Larynx from a fatal case of Hæmorrhage from Throat in a girl aged 6. The specimen showed an abscess cavity in each tonsil, ulceration of the uvula, soft palate, epiglottis, frenum epiglottidis valleculæ, and aryepiglottidean folds. There was deep ulceration of the laryngeal portion of the pharynx exposing muscular tissue. Three small superficial ulcers were present above the right vocal cord. The exact site of the bleeding vessel was not determined, but there was no evidence of erosion of the carotid or internal jugular, or of any glandular abscess.

Dr. C. PAGET LAPAGE showed a Primary Carcinoma of the Liver in a boy aged 6 years. The liver was considerably enlarged, with several rounded prominences on its anterior surface. The marked and progressive engorgement of the abdominal veins and the ascites showed that there was obstruction to the venous return in the region of the liver. There was no jaundice. The post-mortem examination showed that the liver was very large, weighing 6 lb., the right lobe being chiefly affected by large masses of tumour which were also growing into and obstructing the hepatic veins and inferior vena cava; there were secondary deposits in the lungs, but nowhere else. Microscopical examination of the tumour showed polygonal and spheroidal cells in masses and columns, with very little stroma; the cell nuclei were oval or rounded and showed many mitotic figures, and the cytoplasm was granular; there was much fatty infiltration. There were bile-stained areas in the tumour masses and in the lung deposits, but not in the liver itself. The evidence for regarding this tumour as a primary carcinoma of the liver was twofold—viz., (1) the general resemblance of the cells to liver cells in form and arrangement, and (2) the resemblance in physiological function, as shown by the infiltration of fat and secretion of bile in both primary and secondary growths.

Dr. LEONARD G. GUTHRIE read a paper on Epidemic Catarrhal Jaundice. During the months of November and December, 1911, and January, 1912, he had met with 10 cases of jaundice in children. The number of cases was so small that the jaundice might have been regarded as sporadic had not two or more members of the same families been affected in several instances, and had not the patients lived (with two exceptions) in adjoining districts. Eight of the patients came from the contiguous districts of Paddington, Kilburn Park, Harrow-road, and St. John's Wood, and two from Walthamstow. In three instances more than one member of the same family were affected by jaundice within ten days or a fortnight to three months of each other. In one family two sisters, in another two sisters and a brother, and in a third family a brother and sister were jaundiced. Thus seven of the patients were related as brothers or sisters. The remaining three patients were unrelated to each

other. Seven of the children were female and three were male. Their ages ranged between 3 and 11 years. The jaundice was deep in all cases, and associated with clay-coloured stools and bilinuria. The average duration of the jaundice was three to four weeks, but in one case it only lasted a week. Icterus was ushered in by malaise, languor, and sometimes by drowsiness; the temperature was usually slightly raised (99° to 100° F.). Anorexia was the rule, but in one case the appetite was said to be voracious, especially for eggs. Vomiting occurred in two cases; vomiting and diarrhœa in one; vomiting and constipation in another. In one case complaint was made of itching. Bradycardia was not observed in any. The lowest pulse-rate recorded was 66 in one case. As a rule it varied between 72 and 96. A pulse of 120 to 130 was noted in two cases whilst the temperature was elevated. The liver was enlarged in six cases and greatly so in four. In these it extended to within an inch or an inch and a half of the umbilicus. It was smooth in all cases and not tender in any. As soon as bile appeared in the stools and disappeared from the urine, the liver slowly subsided and became normal in size in from one to two weeks. The exact dates of the onset of jaundice in different members of the same family could not in all cases be determined. In one family a girl became jaundiced exactly a fortnight after her sister; in another family a girl was jaundiced on Dec. 4th, and her brother became so on Dec. 16th, 1911. Their elder sister, aged 11, had had jaundice some time in the previous November. In the third family a boy, aged 6, was jaundiced in November, 1911, and his sister, aged 3, became so on Jan. 9th, 1912. Apparently all cases began with definite *malaise*, and probably some slight pyrexia, but none of the patients was seriously ill at any time. In this respect there was no difference between the sporadic and the other cases. The hepatic enlargement was as marked in the former as in the latter, and there seemed no reason to doubt that the sporadic cases were of the same nature as those which occurred in families. No relapses occured in any of the cases, and the recovery was uneventful in all. Similar small and mild epidemics of catarrhal jaundice had been especially frequent during the last three years in this country, and many had been recorded in almost all parts of the world. A distinction should be drawn between epidemic catarrhal jaundice and epidemic infectious jaundice (Weil's disease). The latter seemed to be confined to the shores of the Mediterranean, and to be due to contaminated food and water. In some outbreaks, B. proteus fluorescens had been found in the urine and internal organs of persons dying from the disease. The mortality varied from 10 to 60 per cent. Epidemic catarrhal jaundice was far more widely distributed throughout the world. It was probably "air-borne" and not due to food or water. No specific organisms had been found, and perhaps different organisms might be concerned in producing a catarrhal hepatitis. The mortality was very low, but deaths from epidemic catarrhal jaundice had been recorded in other countries, though not in this. The symptoms and pathological changes in fatal cases were practically the same as in Weil's disease and in acute yellow atrophy of the liver. Acute yellow atrophy of the liver sometimes occurred in members of the same family, and might affect numbers of pregnant women in the same districts. The probable explanation (suggested by Cockayne, *Quarterly Journal of Medicine*, Vol. VI., No. 21, October, 1912) was that unknown organisms which produced catarrhal jaundice might prove fatal when acting upon a liver weakened by some temporary strain, such as pregnancy, or having some inherent insufficiency. This explanation would also cover cases of "post-anæsthetic fatalities" and also rare instances of deaths from what at first appeared to be simple catarrhal or obstructive jaundice. The symptoms and post-mortem conditions did not differ materially from those of acute yellow atrophy of the liver. Epidemic catarrhal jaundice was regarded as a form of hepatitis resembling mumps in some particulars, and not due merely to mechanical obstruction of the common bile duct, consequent to gastro-duodenal catarrh. Although hitherto no fatalities had been recorded in this country from epidemic catarrhal jaundice, the disease might at any time assume more serious proportions. The prognosis in any case should be guarded, and the question, Is jaundice catching? could no longer be answered by a direct negative. It was probably most communicable in its early febrile stage.

PATHOLOGICAL SECTION.

The Origin of Life.—Effect of Radium on Muscle-Nerve Preparations.—Vaccine Treatment of Gonorrhœa.

A MEETING of this section was held on Nov. 19th, Dr. R. T. HEWLETT, the President, being in the chair.

Dr. H. CHARLTON BASTIAN contributed a paper entitled "Remarks on Further Experiments Concerning the Origin of Life." He recorded the fact that his work, "The Origin of Life," published in 1911, had been based on 196 experiments with hermetically sealed tubes whose contents had been exposed to high temperatures. Since then he had performed a much larger series of experiments—as many as 280—and consequently was in a position to pass some judgment on the value of his previous results, to deal with the doubts of others as to the validity of his conclusions, and to offer some useful advice to those who may wish successfully to repeat the experiments. It had long been believed that the occurrence of "spontaneous generation" was a myth, largely through the work of Pasteur and Tindall. In all their experiments Pasteur and Tindall had made use of solutions of organic matter heated to 100° or 105° C., and subsequently protected, more or less securely, from external contamination. Having extinguished all life in their media and receptacles, they exposed them to what were considered incubating temperatures. Then, if evidences of fermentation occurred, they were content to account for it as the result of some error, whilst their numerous negative results induced them to favour a conclusion wider than was warranted. His own experiments had been of the same order, but more stringent, for of late he had dealt with saline solutions only, and had heated to temperatures much higher. Yet, on opening such previously sterilised tubes and solutions, he had taken therefrom undoubted living organisms. The criticism that these were merely pseudo-organisms was disproved by the fact that they freely multiplied when transplanted to other nutritive media. They could not be explained by an inrush of air into the tube when the neck was filed, for they were found in the sediment at the bottom of the tube; nor were they due to an infected pipette, or derived from the air during the short time that the drop of fluid to be examined remained uncovered. Nor were they dead organisms which had pre-existed in the experimental fluids as had been suggested, for these pre-existing organisms could never have been numerous, and were never well-developed in the newly prepared solutions. The fact that minute organisms were either very scarce or absent in control tubes, and were abundant after months in other tubes of the same series which had not previously been opened, was conclusive evidence that they had developed and multiplied. They could not be germs which had survived the heating process, for temperatures ranging from 120° to 145° C. had been used for from 5 to 20 minutes; and further, torulæ and micrococci which had been taken from the tubes were not known to be capable of resisting temperatures even of 60° or 70° C. for two or three minutes. As the result of new experiments he advised that in future trials all tubes exposed to light should be placed just inside a north, or, better still, a north-east, window, unless they could be put into a conservatory and there protected from the direct rays of the sun. Tubes exposed to light should not be examined till nearly six months had elapsed in summer, or from 8 to 12 months in colder or duller weather. During the winter he had used an incubator maintained at 27° and at 37° C., half of the time at the lower and half at the higher temperature. Tubes exposed in the incubator should not be opened under four or six months. Too old solutions of sodium silicate must not be employed, and it appeared that colloidal silica could undergo harmful changes even within so short a period as four months. It seemed clear that it was better not to work with ordinary commercial sodium silicate which was more than 12 months old, and that the dilute colloidal silica used should be prepared only recently. When examining the solutions he used a pipette about 8 in. long, with a bore of 3 mm., and having a rubber teat at its upper end. It was desirable to take up only a single drop of the sediment. When the organisms were scarce and minute their recognition might be facilitated greatly by running under the cover-glass a drop of a freshly filtered solution of eosin or of carbol-fuchsin

Dr. W. S. LAZARUS-BARLOW and Mr. T. J. DUNBAR showed lantern slides illustrative of the Effects of the

Radiations of Radium upon the Muscle-nerve Preparation of the Frog. The method adopted was to determine every half hour the minimal single-shock stimulus (given through the du Bois-Reymond coil from accumulators) sufficient to call forth a muscular contraction. The fellow muscle-nerve preparation from the same frog was used in each case as a control, and the stimulus was thrown simultaneously into the experimental and control systems, the path between the two non-polarisable electrodes being made by the crossed distal portions of the two nerves. There was evidence to show that under alpha rays the irritability of the muscle-nerve preparation was longer preserved than under control conditions, and that beta and gamma rays were without effect. Consideration of curarised muscle-nerve preparations and of non-curarised preparations with the nerve cut close to the muscle (in both of which instances one non-polarisable electrode was applied to the muscle direct and the path was completed by a copper wire laid across the two Achilles tendons) showed that the radiations were without effect upon the nerve-endings, produced some effect upon the muscle, and considerable effect upon the nerve. No histological changes were found. The research is being continued.

Mr. J. E. R. McDONAGH and Dr. B. G. KLEIN communicated a paper on Some Points concerning the Vaccine Treatment of Gonorrhœa and the Regulation thereof by the Complement Fixation Test. After using several different strains of gonococci they found that a ratio existed between the properties of the antigen as exhibited in the complement fixation test and the therapeutic action of the same antigen used as a vaccine. They also pointed out that the strength of an antigen bore no relation to the severity of the disease, but that the course ran by the disease was determined by the resistance of the patient, the mode of entrance of the gonococci into the body, and the quantity thereof. They were of the opinion that it was far more important to use a vaccine recently made from an original culture or first subculture than to lay great stress upon the vaccine being autogenous. Three methods of vaccine treatment were employed and regulated by the complement fixation test: (1) Ordinary vaccines injected intramuscularly or subcutaneously; (2) autolysed vaccines injected intravenously; (3) sensitised vaccines injected intramuscularly or subcutaneously. The disadvantages of No. 1 were found to be: the negative phase occurring after the injections and the toxic symptoms which followed a prolonged course of treatment. Great stress was laid upon the dose and the intervals that should elapse between each injection. The negative phase was practically negligible after intravenous injections, but as about ten injections were required the toxic symptoms following them could not be avoided. Sensitised vaccines overcame all these difficulties, provided a human antigonococcal serum was employed.

MEDICAL SOCIETY OF LONDON.

Exhibition of Clinical Cases.

A MEETING of this society was held on Nov. 25th, Sir W. WATSON CHEYNE, Bart., the President, being in the chair.

The PRESIDENT showed two cases of Formation of New Joint. Case 1, a girl aged 12, was first admitted to hospital on Dec. 14th, 1911, suffering from ankylosis of the right hip joint as a result of old tuberculous disease. The tuberculous trouble commenced in 1908 and she was treated first in the hospital and later outside by splints (Thomas's), crutches, &c. When she was admitted the right hip joint was completely ankylosed, there was 2¼ in. shortening in the right leg, and the leg was adducted and rotated somewhat outwards. On Jan. 3rd the President performed an arthroplasty on the lines of Murphy's operation on the outer side of the thigh, extending downwards in front from the anterior superior spine and then curving across the thigh, then upwards behind the joint to about the same level. A large flap about 5 in. long and 4 in. broad was cut through the skin and superficial fascia; this was turned up to the full extent, leaving the deep fascia exposed. This again was turned up and formed a long flap of fibrous tissue with a certain amount of fat on both surfaces. The next step in the operation was to saw off the trochanter obliquely and turn it up along with the muscles attached to it so as to expose the neck of the femur. The remains of the capsule of the joint were divided and the neck of the bone and the margin of the acetabulum were exposed, and with a chisel the head of the bone was gradually got out of the acetabular cavity; it was soft and mis-shapen, and it was shaved down so as to form a round head. The head left was small. On turning out the head of the bone remains of old extensive disease in the acetabulum were found in the shape of marked destruction of the floor of this cavity in one or two places, leading to a complete perforation into the pelvis, and a large amount of cheesy material was filling up the deeper part and passing into a cavity outside the joint. All this cheesy stuff was cleared out, the acetabulum was scraped and smooth, and it was seen that the head of the bone, though small, would keep fairly well in position in the acetabulum. The edge of the acetabular cavity, round which there was a quantity of new bone, was chipped away so as to allow free movement of the hip without the permanent acetabular edge catching on the femur. The fascial flap was now taken and a vertical cut made in the upper part of it sufficient for the trochanter and the muscles attached to it to be brought forward, and then the flap was folded around the head of the femur and retained in place by a circular stitch round the neck of the bone. The head of the femur was now returned into the acetabular cavity covered with this fascial covering, and the trochanter was brought down to the raw surface and fixed in place by a couple of screws. The patient went on very well, the wound healed rapidly by first intention, and movements were possible without pain at quite an early period. On March 6th the screws were removed as they were rather long and seemed to interfere with the extreme movements of the joint. She was discharged on April 28th, and was then sent to the orthopædic department for movements and exercise. On July 2nd, that is to say, about four and a half months after the operation, she came with a swelling which had appeared a few days previously on the outer side of the scar. This was fluctuating, and when opened was found to contain thin cheesy pus, evidently of a tuberculous character, which had come from the old tuberculous focus. Since then the discharge had gradually diminished, and there was a small sinus which had almost healed. The patient was able to walk very well, and the movements of the joint were almost perfect in all directions. Case 2, a girl aged 15, was first admitted to hospital on Feb. 4th, 1911, with ankylosis of the left elbow. The history was that nearly three years previously she had been seized with acute pain in the elbow without any known cause and she was taken next day to a children's hospital where the elbow joint was laid freely open. Evidently she had an acute suppurative arthritis from unknown cause. The wounds healed in about three months and the elbow joint became fixed. She was admitted into hospital to see if she could get a movable joint. At that time the elbow was fixed at an angle of about 100°; with the exception of a little pronation and supination absolute bony ankylosis was present. On Feb. 15th the President broke up the union, removing the olecranon process and what seemed at the time to be a sufficient amount of the lower end of the humerus to permit of further movement. He practically did the old operation of excision of the elbow except that he did not interfere with the head of the radius. Passive movements were carried out for some time, but after the patient left the hospital she kept the arm stiff and she returned in January, 1912, with complete ankylosis and the arm fixed at an angle of about 30° in the pronated position. On Jan. 10th he performed an arthroplasty, again following the lines recommended by Dr. Murphy, of Chicago; an antero-internal flap was first made on the inner side of the arm about 3 in. long and 2 in. broad, and a similar postero-external flap on the outer side. The skin and superficial fascia were then turned up, leaving the deep fascia exposed with a little fat on the surface. This was divided along the same incision as the skin, and the two flaps of fascia with a little fat adhering to them were turned up, these flaps being held out of the way. The bone was now divided across by a chisel, the division being somewhat curved upwards in the centre. The bones were shaped so as to fit into one another to a certain extent, and the head of the radius was taken away. The fascial flaps were now turned in between the humerus and

the bones of the forearm and stitched in position, so as to prevent any contact of the two bony surfaces. A piece of fascia was also wrapped round the head of the ulna. There was nothing remarkable about the progress of the case. The wounds healed by first intention, and movement was begun very soon. The movement was not particularly painful, except when carried to extremes, but at first they were done under gas. The present condition was a most excellent elbow-joint; it was freely moveable in the direction of flexion and extension, and there was a considerable amount of rotatory movement, although that was not perfect. Further, the joint was firm, much firmer, in fact, than an excision of the elbow-joint usually is, and there was not the same amount of lateral mobility. The patient had been able to take up work as a needlewoman.

Dr. F. S. PALMER showed two cases of Friedreich's Ataxia. 1. A boy, aged 16 years, the youngest of a family of three, one brother (19 years) quite healthy, one sister (18 years) similarly affected (Case 2). Both parents are alive and well. No history of nervous or mental disease can be traced in previous generations, nor among the collateral branches. His present illness began about three years ago—six months after an attack of epidemic influenza—with weakness in standing and walking, staggering gait, incoördination of the upper limbs, and irregular movements of the muscles of the face, hands, and neck. He had not been able to walk unsupported for the past nine months. He had marked ataxy of the lower limbs, Rombergism, incoördination of the arms, scoliosis, dysarthria, pes cavus with hyperextension of the toes, and the extensor type of plantar reflex on both sides, nystagmus in all directions, absent knee-jerks, and choreic movements of the face and neck muscles. In addition he had very marked weakness and atrophy of both hands, arms, and shoulders. The thenar and hypothenar eminences, interossei, deltoids, spinati, and trapezii were all wasted, and he had commencing "main-en-griffe." There was considerable deformity of his sternum and costal cartilage from early rickets. Sensation was normal, mental condition good, and the sphincters were unaffected. The electrical reactions showed no polar changes, but decided decrease of excitability to both currents. Some of the muscles of the lower limbs did not respond to galvanism and others were very sluggish. 2. His sister aged 18 years. She had had a severe attack of epidemic influenza at the same time as her brother. Her illness began a year later, with shaking of the hands and unsteadiness of her legs. She had not walked without assistance for the last six or seven months. Like her brother she was rather short in stature, but otherwise she was well developed. She presented all the characteristic features of Friedreich's ataxia, but perhaps in a less advanced stage. The interesting features in her case were hyperextension of some of her fingers, bitemporal pallor of both optic discs, and the changes in her electrical reactions. To faradism in the upper limbs there was slight decrease of excitability in both nerves and muscles, more marked on the right side; in the lower limbs decrease more definite on the right side and sluggish responses. To galvanism in the upper limbs, contraction sluggish but no polar changes found; in the lower limbs decrease very marked, especially in the thigh muscles. The responses were slow in appearing and irregular in action. There were polar changes. A.C.C. was greater than K.C.C. in some parts of the muscles.

Dr. F. J. POYNTON and Mr. J. L. DAVIES showed a case of Congenital Heart Disease, Cystic Liver, and Cystic Kidney. The patient, a man aged 32, was admitted to University College Hospital on Oct. 15th, 1912, complaining of frequency of micturition for six weeks, having to get up three or four times a night. He had also noticed that his urine had been dark, and that a black sediment formed for about a month before admission. There was no pain. No history of previous polyuria. The patient had also suffered from a troublesome cough for a fortnight. He had right-sided pleurisy two years ago, and had frequently been told by doctors that he had a weak heart, but did not appear to have any symptoms of cardiac failure. On admission it was seen that the patient was a pale man who appeared to be in no pain. He had no definite clubbing nor œdema. A slight purpuric rash was present on the anterior aspect of both legs. The pulse was regular and well sustained, but the arterial walls were thickened. The blood pressure was 130–140 mm. Hg. The apex beat was diffuse, visible in fifth and sixth spaces, its outermost limit in mid-axillary line in the sixth space, heaving in character. A systolic thrill was palpable over the præcordium, best felt at the apex. Percussion showed enlargement of the left ventricle to the mid-axillary line; no enlargement of the right side of the heart could be detected. On auscultation the heart sounds were not audible except the second at the pulmonary cartilage. A rough systolic murmur could be heard over the præcordial region, best at the apex: this murmur was conducted out to the axilla and could be heard at the back, especially on the left side. Over the sternum at the level of the third left space it seemed very superficial, and its character suggested a congenital lesion. There was diminished air entry below the clavicle on the left side and crepitation was present in this region, suggestive of tuberculosis, otherwise the respiratory system was normal. The abdomen moved with respiration and was slightly distended. There was no marked tenderness or rigidity. A mass could be felt on the left side of the abdomen. The surface was smooth and freely moveable antero-posteriorly. Anteriorly a well-marked margin could be felt reaching to within 2 inches of the mid-line. The lower pole of the tumour was ill defined. It moved slightly on respiration. The percussion note over the tumour was dull. On the right side an ill-defined tumour was palpable, presumably the right kidney. The edge of the liver could not be felt, but there was rigidity in the epigastrium and dulness to 3 inches below the xiphisternum. The specific gravity of the urine was 1005; albumin and blood were present. Microscopically, blood and a few pus cells were seen, also hyaline and granular casts. No tubercle bacilli in the sputum or urine.

Mr. PAUL B. ROTH showed a case for diagnosis, ? Osteitis Deformans. The patient was a woman aged 45. Soon after the birth of her last child, ten years ago (it was a seven months baby, and only weighed 2½ lb.), she began to have trouble with her right leg. It gradually became bent below the knee, and was slowly getting worse. She had much pain in the leg; it often kept her awake at night, and was very severe. She walked with a severe right limp. The right tibia was enormously thickened, quite twice the size of the other, and was severely bowed outwards and forwards. The skin over it was polished and dusky, containing many enlarged veins, and felt slightly hotter than that on the left leg. All the other bones appeared normal. A radiogram showed that the thickening was due to an overgrowth of the compact bone of the diaphysis; it had not encroached upon the medullary cavity, but had enlarged outwardly, apparently under the periosteum. The thickening stopped short of the lower epiphysis. The appearances were similar to those shown by a case of osteitis deformans. It seemed to be either a case of congenital syphilitic osteoperiosteitis, commencing at an unusually advanced age, 35 years, or of osteitis deformans affecting only one bone. The Wassermann reaction had not been tested.

Mr. A. E. BARKER showed four cases illustrating Septic Diseases of the Knee-joint of Various Origins. 1. An acute septic infection of both knees, apparently due to pyorrhœa alveolaris, which was very extreme. No other source of infection could be found. The condition of the right knee began six weeks before admission; of the left, one week. Both joints were full of fluid and acutely inflamed and tender. All symptoms were most marked in the right. The general and local temperature were much raised. On admission the right joint was aspirated and purulent fluid drawn off. This contained numerous diplo-streptococci. After a few days' rest the right joint was opened and found to contain much turbid fluid and large masses of tough fibrinous coagulum, both fluid and solid being saved for bacteriological examination kindly undertaken by Dr. Poynton. The joint was flushed with hot saline solution and the wound stitched up without a drain. Healing took place by first intention. The left joint was simply aspirated, the turbid fluid being saved for Dr. Poynton. Diplococci, streptococci, and M. catarrhalis were grown from the fluid on the right side; nothing could be cultivated from that on the left. Both joints had recovered their movements rapidly. The left appeared quite normal when exhibited, the right was still slightly limited in flexion. 2. The left knee-joint began to swell about six weeks before admission, and had been acutely tender, hot, and swollen for a week. The only sources of infection found were pyorrhœa alveolaris and a bad boil on the arm. In the

out-patient department 6 or 7 oz. of almost purulent fluid were drawn off. Cultivation on usual media was negative. On admission the joint was distended as before. An incision was made and much turbid fluid and coagula removed for Dr. Poynton. The cavity was then flushed out with hot saline solution and the wound closed without drain. Dr. Poynton reported that diplococci were found, only growing with difficulty on special media. The wound healed by first intention, and the joint was perfectly well in three weeks. 3. Under the left deltoid was an acutely inflamed area following an attack of pneumonia of the right lung ten days before. The swelling was diagnosed as suppuration of the subdeltoid bursa not communicating with the shoulder-joint. It was opened anteriorly and found to contain much pus. The diagnosis was found to be correct. The pus examined by Dr. Poynton was found to swarm with the diplococcus pneumoniæ. The joint had rapidly recovered. 4. In this case the knee-joint was acutely inflamed without injury, the only source of infection which could be found being pyorrhœa alveolaris. After treatment with Bier's bandage the joint was opened on each side and washed out and drained, much pus being evacuated. The result was very good; the patient on leaving hospital had excellent movement.

HUNTERIAN SOCIETY.

Exhibition of Cases and Specimens.

A CLINICAL meeting of this society was held on Nov. 13th, at the Westminster Hospital, Mr. A. H. TUBBY, the President, being in the chair.

Mr. WALTER G. SPENCER demonstrated a specimen of Hirschsprung's Disease—viz., the lower half of the colon dilated to look like a motor tyre tube. The boy had suffered from increasing dilatation, with constipation and intermittent attacks of obstruction. He had been explored a year before at another hospital. As he had become much worse he was sent into the hospital by Mr. John Adams, and Mr. Spencer excised most of the colon. But the operation had been done too late. After death stercoral ulcers above the level of the excision were found to have perforated.

Mr. SPENCER also showed: 1. A case of Varicose Veins in both Legs. The veins had been treated by a spiral incision extending round the thigh and leg for rather more than the whole circumference with good result. Mr. Spencer had employed this method for small veins diffused all over the limb. The incision was carried down to the aponeurosis of the muscles and the margins well retracted so as to divide every superficial vein. Then the cut veins were ligatured and the skin sutured. 2. An infant suspended on a gallows as for a fractured thigh, who was contentedly sucking its bottle 24 hours after operation for a very large Inguinal Hernia. After admission the child had been suspended on the gallows for some time before operation, by which the hernia was kept largely reduced and the infant in a more favourable state.

The PRESIDENT showed: 1. A boy, aged 5½ years, who gave a history of Injury to the Right Arm four years ago, following which the arm had always been weak. On examination marked weakness and wasting were found in the right triceps, deltoid, and latissimus dorsi; there was no loss of cutaneous sensations. Some fulness was felt in the right supraclavicular fossa, and an X ray photograph showed an elongated transverse process to the seventh cervical vertebra. This was removed by the President, assisted by Mr. E. Rock Carling. Special care was taken to remove that portion of the bone which was compressing the upper cord of the brachial plexus and a fibrous process partially obstructing the subclavian artery. In the after-treatment, the President laid stress on the importance of rest to the paralysed muscles, this being secured by fixing the arm in an extended position at right angles to the trunk by means of a malleable iron splint bent at a right angle in the axilla. 2. A case of Angioma of the Lower Lip, Tongue, Tonsils, and Fauces.

Mr. ROCK CARLING showed a case of Jacksonian Epilepsy following a fracture of the skull.

Mr. J. M. G. SWAINSON showed two cases of Fracture which had been treated by operation and plating in which he had assisted at the operations. The first case was under the care of Mr. Tubby and was a transverse fracture of the bones of the forearm caused by direct violence. Before operation, three weeks' treatment with splints had been tried. The second case was a Fracture of the Upper Shafts of the Tibia and Fibula, under the care of Mr. Rock Carling. There was considerable displacement, and before admission to hospital nine weeks' treatment by splints and extension had been tried, followed by one month in plaster-of-Paris. Skiagrams showed union in good position in the two cases and the shortening was slight.

Dr. PURVES STEWART demonstrated the following specimens: 1. A Tumour in the Centre of the Pons, in which the symptoms had commenced with paralysis of the muscles of deglutition and articulation, and had spread upwards towards the facial and ocular muscles. Before death there were signs of hemiplegia on the left side. The patient died suddenly from generalised convulsions. 2. Left Ponto-cerebellar Tumour in a boy aged 11, the symptoms commencing with paralysis of the right trigeminal nerve, sensory and motor, together with loss of sensation to pain and temperature on the left side of the trunk and limbs. Subsequently other cranial nerves on the right side became affected, including the sixth, seventh, and eighth. The tumour extended from the upper margin of the pons to the medulla on the right side, displacing the brain-stem towards the left and implicating in its substance the cranial nerves on the right side. 3. Tumour of the Right Occipital Region, accompanied by a large hæmorrhage subjacent to the right precentral region. The area between the hæmorrhage and the occipital growth was free from disease. During life the patient had left-sided hemianopia and left-sided hemiplegia, without any hemianæsthesia.

Dr. STEWART also showed the following clinical cases: 1. A case of Cerebral Syphilis in a man aged 28 years. Prior to admission his sole symptoms had been inveterate and agonising headache, together with a rapid failure of sight in both eyes. On admission he had double optic neuritis, with blindness of the right eye and impaired vision in the left. The other cranial nerves were normal. His sensory, motor, and reflex functions were all normal. The cerebro-spinal fluid gave a positive Wassermann reaction and showed a large lymphocytosis (76 per c.mm.). The patient had been treated by repeated doses of salvarsan, 0·3 gramme at a time at intervals of a week. The headache rapidly disappeared and the patient's vision was improving. The optic neuritis was also subsiding. The lymphocytosis was diminishing week by week. Dr. Stewart emphasised the importance of giving small doses of salvarsan repeatedly rather than massive doses. By this means certain dangers of salvarsan medication, especially in cerebro-spinal syphilis, were avoided. 2. A case of Disseminated Sclerosis in a woman aged 46. The symptoms at the present time were those of a moderate left-sided hemiplegia, together with a reeling gait, characteristic of cerebellar disease. The interest of the case lay in the fact that he had seen the patient six months previously when she showed no signs of organic trouble, her reflexes, superficial and deep, being normal and equal on the two sides, and there being no definite hemiplegia. The original diagnosis made was that of functional disease at the menopause, but the subsequent course of the malady proved this to be wrong, and the case was now typical of disseminated sclerosis. 3. A patient with Right-sided Cranial Nerve Palsies, a man aged about 40, who had complained of vague giddiness and discomfort in the head for some months, but nothing further until a few days ago, when he noticed that his right eye was bulging and his right lid drooping. On examination there was almost complete paralysis of the right third, fourth, and sixth nerves, with proptosis of the right eye. The right internal pterygoid was paralysed, but not the masseter. The palate was severely paralysed, the right side being more affected than the left. The face, sterno-mastoids, and tongue muscles were all normal. There were no sensory, motor, or reflex changes in the trunk or limbs. The optic discs showed no abnormality. Dr. Stewart proposed to examine the cerebro-spinal fluid, both as to its cell contents and its Wassermann reaction. The symptoms pointed to a lesion of the meninges at the base of the skull. 4. A case of Extra-cerebellar Tumour in a woman aged 28. For 18 months she had had progressively increasing deafness, with failing sight, and had also developed a typical cerebellar gait. The left arm and leg seemed to be more unsteady than the right. There was coarse nystagmus, more marked to the right. The optic discs were

intensely swollen. In view of the intensity of the optic neuritis an operation was undertaken by Mr. Tubby in the left ponto-cerebellar region. The tumour was felt at the side of the pons, but it was not accessible for removal. The patient made a good recovery from the operation, but now showed signs of cranial nerve palsies on the left side, including the third, fourth, fifth, sixth, and seventh nerves. The eighth was previously paralysed. The palate had also become paralysed on the left side since the operation. It was suggested that the cranial nerve palsies were largely traumatic in origin from the operation.

Dr. H. B. CARLYLL showed (for Dr. A. M. GOSSAGE) a man, aged 74, with Vertical Chains of enormously Dilated and Tortuous Veins running down the front of the thorax and abdomen, the upper level being at the second rib on each side. The left brachial vein was dilated, otherwise there was no venous enlargement of the arms, neck, or face. There was no œdema anywhere. There were many years' history. Flow of blood was downwards (except in the brachial). There was no abnormal dulness or pulsation in the thorax. Specific disease was admitted. The diagnosis was occlusion of the superior vena cava, probably a specific thrombosis, the blood escaping from the innominate veins and passing by this abnormal anastomosis to the iliac veins and thence to the heart. Absence of venous enlargement and œdema in the face and arms was accounted for by the fact that circulation was compensated by the enormous size of the anastomosing vessels. The internal saphenous veins were very dilated and varicose. This was a separate condition, though probably brought about partly by congestion of the iliac veins above mentioned.

Dr. R. G. HEBB and Dr. J. A. BRAXTON HICKS gave the following demonstration of Clinical-Pathological Methods: (1) Widal's agglutination reaction for bacillus typhosus, &c.; (2) Wassermann's reaction for syphilis, both the original and Fleming's techniques; (3) a new method of estimating the strength of a vaccine by a standard bacterial emulsion; (4) a new form of vaccine shaker, and a new form of centrifuge; (5) cultivations on solmedia (12); (6) microscopical specimens, including spirochæta pallida, spirochæta refringens, cerebro-spinal fluid with tubercle bacilli, cerebro-spinal fluid from tabes, pleural fluid from a case of cancer, pentosazon crystals from the pancreatic reaction, malarial parasites, trypanosomes, Curschmann's spiral, echinococcus scolices, blood from leukæmia and pernicious anæmia; (7) renal, vesical, and biliary calculi, (11 cases); (8) adenomyoma of uterus, epithelioma of shoulder, sarcoma of stomach, sarcoma of bronchus with bronchiectasis, liver adenoma and cirrhosis, aneurysm of abdominal aorta, laceration of heart, heart with stenosis of all four valves, heart congenital—absence of interventricular septum; (9) spinal cord sections, insular sclerosis, tabes, bilateral sclerosis (2 cases), syringomyelia.

EDINBURGH OBSTETRICAL SOCIETY.

Presidential Address.—Election of Officers.

A MEETING of this society was held on Nov. 13th. Dr. J. HAIG FERGUSON, President, occupied the chair.

The PRESIDENT delivered an address on Some Twentieth Century Problems. Life for all contains three chief adventures—birth, marriage, and death. As obstetricians and gynæcologists we come more intimately in contact with birth and marriage (and, incidentally, with death) than almost any other section of the community. What assistance can we give individually and collectively in dealing with these great problems? There is an earlier duty than safely launching a new-comer on the troubled sea of his or her career. It is coming to be more and more fully recognised that the months before birth are of the greatest possible importance to the infant. Therefore, our first care should be "endo-uterine puericulture," involving the judicious care of the mother so that the resultant child will be an advantage to the race, and not an encumbrance or a danger to it. Pre-natal care diminishes prematurity, increases the weight of the child, and decreases the infantile mortality during the first ten days after birth. The institution of health visitors by private effort has been of great value in the preservation of infant life. The endowment of motherhood has been aided by the State in regulating the hours of women's work, paying for medical aid during confinement under certain conditions, forbidding industrial labour for four weeks after confinement, and securing early notification of births. The National Insurance Act provides maternity benefit for all under the monetary limit of the Act. When the labouring woman can get a midwife for less than a doctor, she will naturally choose the less expensive. In Edinburgh the dispensaries will suffer, yet there will be no corresponding benefit to the labouring woman if you substitute an uninspected midwife for the supervised and senior dispensary student. Maternity hospitals will suffer, as women will only avail themselves of the hospital when they are desperately ill, and there will be no adequate experience possible for the practical training of either students or nurses, normal cases being absolutely necessary for that training. To make a hospital popular it must be abundantly proved to the women chiefly concerned that it is to their interest to go into hospital. It seems to be, under the Act, a question of money. If the woman sees it is to be worth her while financially to go into hospital, she will go. The second adventure of life is marriage, and individuals must be trained physically, mentally, and morally to meet its duties and responsibilities. It is questioned by some whether we are justified in attempting too strenuously to prolong existence for those who may thereby be enabled to hand on an inheritance of disease. But it is our bounden duty to preserve life at all costs, and every effort should be made to keep alive every child born into the world, however tainted its body or mind may be. What we aspire to is to have only children of good stock. The ideal conditions racially for marriage are good physical health, steady mental balance, pleasing exterior (beauty if possible), and, above all, beauty of character. There should be definite teaching as to the privileges of parenthood. General education at present produces physical and mental overstrain in girls. Examinations for girls are too frequent and too competitive. The diminishing birth-rate is at present a serious factor in the condition of our nation. In 1876 the average birth-rate was 36 per 1000, and it has steadily diminished until in 1910 it has sunk to about 25 per 1000. The average number of children to each fertile marriage before 1870 was 5·2, whereas it had sunk in 1890 to 3·1. In a confidential census by Sydney Webb taken among the class of intellectuals, the average number of children to each marriage was considerably under two. An inquiry among Roman Catholic families gave an average of 6·6 children to each marriage in the period from 1871 to 1890. The significance of this lies in the fact that the Roman Church is known to discountenance any artificial restriction in the number of children in a family. The Jewish people has always considered marriage as a primary duty of mankind, and still maintains the family ideal. Sterile marriages may always occur from natural causes, but all available data tend to confirm the lamentable fact that our diminished birth-rate is chiefly due to deliberate and voluntary arrangement on the part of individuals too often to gratify the desire for the pleasures of society and self-gratification at the expense of healthy and rational life. Some say they can educate well one or two children, and not a larger number. But quality is often determined by quantity in families, and the best and most progressive all-round results as regards individuals spring from nature's arrangements and not from those of art or design. Selfishness and a morbid fear of pregnancy and labour are too common among women, and we should counteract these tendencies. Many men view the married state as a legal means of unlimited self-indulgence, totally regardless of the wishes or feelings of their wives. Continence before marriage and self-restraint after it will need to be impressed on men from their youth upwards as primary simple decencies of existence. The birth-rate is highest among the unfit, yet it is the quality of the population that is of importance. Everything should be done to make motherhood a safe as well as a supremely honourable and honoured profession. The third adventure is death, and disease the cause of it. Lister has accomplished much in diminishing the morbidity and mortality of childbirth, when his principles are loyally and faithfully carried out at the bedside. In maternity hospitals septic infection is practically abolished; in general practice, however, the death-rate remains much as it was in Scotland. Dr. A. K. Chalmers, medical officer of health of Glasgow, shows that puerperal fever is occurring in the practice of midwives

and nurses at twice the rate which obtained in the practice of qualified practitioners when they had charge of the patients from the beginning. This is a strong argument in favour of having the Midwives Bill for Scotland placed on the statute book as soon as possible. The nursing element is an increasingly important factor in obstetrics. It should be a punishable offence for a labouring woman not to have a competent attendant; the pupils of teaching institutions should be included in the category of those qualified to attend. The puerperal mortality in Scotland from other causes than sepsis does not unfortunately show any diminution; this is to some extent explained by the increased mortality from eclampsia. Recent investigations of Neuberg, Caspari, and Löhe in the treatment of cancer will be watched with the greatest interest. It seems to be in the region of bio-chemical research that we are to look for further advance in our knowledge and treatment of disease.

On the motion of Sir J. HALLIDAY CROOM and Dr. D. BERRY HART, the President was cordially thanked for his address.

The following were elected office bearers for the ensuing session:—President: Dr. J. Haig Ferguson. Vice-presidents: (Senior), Dr. J. W. Ballantyne; (Junior), Dr. G. F. Barbour Simpson. Treasurer: Dr. John McGibbon. Secretaries: Dr. Angus Macdonald and Mr. E. Scott Carmichael. Librarian: Dr. J. Lamond Lackie. Editor of Transactions: Dr. James Young. Members of Council: Dr. F. W. N. Haultain, Sir J. Halliday Croom, Dr. William Fordyce, Dr. A. M. Malcolmson, Professor R. G. McKerron (Aberdeen), Dr. G. Keppie Paterson, Dr. J. W. Keay, and Dr. R. W. Johnstone.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

Symphysiotomy, Pubiotomy, and Cæsarean Section.—Tubal Pregnancy.—Sterility.

A MEETING of this section was held on Nov. 8th, Dr. R. D. PUREFOY, the President, in the chair.

Dr. E. H. TWEEDY exhibited a patient illustrating the three modern operations of Symphysiotomy, Pubiotomy, and Cæsarean Section, for the birth of the living child in contracted pelvis. Symphysiotomy was performed on one occasion, pubiotomy on another, and Cæsarean section on the last. When performing the Cæsarean section he tied the tubes, as he considered the patient had suffered enough at the hands of the surgeon. There was no material difference between any of the operations so far as the time occupied in bed or stay in hospital was concerned. The longest stay was three weeks and the shortest a fortnight. Symphysiotomy was a little more difficult to perform than pubiotomy, but he did not agree with the general idea that the former was a painful and very difficult operation. The scar was about half an inch long instead of the pin-point scar of pubiotomy. There was not the slightest interference with locomotion.—Mr. J. SPENCER SHEILL asked if Dr. Tweedy could give the exact diameters of the pelvis in the case, as symphysiotomy or pubiotomy was usually applied in one class of case and Cæsarean section in another. It would, he thought, be of interest to know why the three operations were performed in the order they were.—Dr. TWEEDY, in reply, said he performed symphysiotomy first because the diameter of the pelvis permitted it and the woman was in labour; pubiotomy secondly because it was the easier operation, and Cæsarean section on the last occasion because the patient was not actually in labour, and he was not certain that the second pubiotomy would have been a safe procedure.

The PRESIDENT read a paper on a Case of Tubal Pregnancy with Severe Symptoms without Rupture, and also showed specimens.—Dr. GIBBON FITZGIBBON said that at a first glance on removing a tumour of the sort, one would be justified in suggesting tubal pregnancy, but in the face of the microscopic report it was difficult to be satisfied. He did not know whether there was anything in the case to suggest that the tube had discharged the pregnancy and the hæmatoma had formed then in the tube.—Dr. R. J. ROWLETTE said that his examination of the specimen, as far as proving tubal pregnancy was concerned, was negative. On the other hand, he did not know that the absence of anatomical evidence was a disproof. The specimen showed a concentrated effusion of blood as if the bleeding were at a definite point. He thought the diagnosis must rest on the history rather than on the examination of the specimen.

Dr. TWEEDY read a paper on Sterility, the Salient Feature in General Tubercular Peritonitis.—Sir WILLIAM J. SMYLY said that the paper called attention to several points of considerable practical importance. The first was that sterility not infrequently depended upon conditions which could not be ascertained by palpation alone, and could only be detected after the abdomen had been opened. Therefore, in cases in which it was considered advisable to operate for the cure of backward displacements of the uterus in sterile women a method in which the abdominal cavity had to be opened would be preferable to one in which it had not, and for that reason he had latterly adopted a modification of Gulliam's method of shortening the round ligaments in preference to Alexander's. The next point was whether we would be justified in going even further and recommending an abdominal operation on a patient who, excepting sterility, had no symptoms whatever. Under certain conditions he agreed with the author of the paper that we were.—Dr. SOLOMONS regarded sterility as a disease, inasmuch as in those cases where there was no definite pathological lesion there was often such a diseased state of mind that the patient was constitutionally ill. According to statistics collected by Brickner, the operation of posterior division of the cervix only gave a 27 per cent. cure of sterility. Dr. Solomons said that if the tubes could be felt very distinctly some disease was present, while he considered that retroversion alone without retroflexion was always associated with tubal disease.—Dr. FITZGIBBON said that in one case in his experience with retroversion of the uterus the whole symptom was sterility. He could not make out anything wrong, but on doing a laparotomy he found both tubes diseased in the entire length, and he decided to remove them. This, he considered, bore out Dr. Tweedy's opinion that for retroversion the operation of opening the abdomen to see the state of the tubes was desirable. He added that frequently the tubes were at fault in cases of sterility, even when nothing very definite could be made out.—The PRESIDENT said that a good deal had been heard about displaced uterus and the fixing of it in a correct position, and it appeared to him that all the methods had advantages and disadvantages. Failure, he considered, was bound to follow if the round ligament was shortened and pregnancy afterwards took place. The same observation applied if the thin supports obtained failed to be of use in subsequent pregnancy. He considered the cause of secondary sterility of even more importance than primary sterility.—Dr. TWEEDY, in reply, said before any serious operation was undertaken the sterility or otherwise of the male should be ascertained. He thought that anyone would be encouraged to open the abdomen in a case of one-child sterility. He was aware that sterility was a symptom of some other disease, but for the matter of that so was club-foot, and yet all did not speak of the latter as a mere symptom.

ÆSCULAPIAN SOCIETY.—A meeting of this society was held on Nov. 8th, at which Mr. Henry Curtis, the new President, delivered an address on Enlarged Prostate, recent views as to its management from the point of view of the general practitioner, what should be done, and what should be left undone. After a preliminary sketch of the symptoms and treatment of the three well-known groups of cases ("irritable bladder," "painful retention," and "painless incontinence" types) of enlarged prostate due to the presence of a definite tumour, a benign fibro-adenoma, the speaker indicated that the object of his paper was to emphasise certain views now agreed upon by many of the leading British, American, and continental urinary surgeons. The views in question related to (1) the use of the catheter in diagnosis, especially of the presence and amount of residual urine in such cases; (2) the use of the catheter in treatment; and (3) the choice between catheter life and prostatectomy. Modern urinary surgeons are coming more and more to discountenance the use of the catheter as a diagnostic instrument. Short of prostatectomy, it should be clearly recognised that treatment for the most part is merely palliative. One should frankly face the real source of the trouble—namely, the presence of a definite tumour in the prostate. In deciding whether a patient has now arrived at the critical epoch when catheter life or a radical cure by means of prostatectomy

has to be advised, a serious amount of residual urine—namely, about 4 oz.—can generally be estimated by bimanual examination. The use of the catheter in such cases in the past has too often been undertaken with the most perfunctory precautions against the introduction of sepsis, with the result that the residual urine, and so the higher urinary tract, has become perhaps seriously infected. Such infection, accompanied as it is by chronic back-pressure on the kidneys, results in a state of chronic ascending septic pyelitis, leading slowly but surely to a condition of renal inadequacy, with unmistakeable uræmic symptoms, such as morning sickness, headache, thirst, anorexia, dyspepsia, and backache, often ascribed merely to "lumbago." Contrary to what has been generally believed hitherto, statistics of mortality within the first month or two after the first catheterisation in such cases show conclusively that instrumentation is attended with a higher mortality (8 to 10 per cent.) than prostatectomy, which is stated by Kidd to be from 4 to 6 per cent. Thus, the lecturer on genito-urinary surgery in the Harvard Medical School, Dr. Francis Watson, the pioneer in America of modern prostatic surgery, in the *Annals of Surgery* for June, 1904, published a table of 207 cases collected by himself, Rovsing and Casper, the greatest authorities on the continent, giving the results of catheter treatment in which the mortality following within one month of the beginning of the use of the catheter in these cases was found to be a little less than 8 per cent. Writing in 1908 Watson and Cunningham say: "We believe that if the time of observation were extended to two months the death-rate would be a good deal higher than 8 per cent."; and elsewhere they say, "in a considerable proportion of cases, probably not less than 10 per cent." Every month's use of the catheter must tend to multiply such a heavy mortality, which even at the lowest rate mentioned compares very unfavourably, as Mr. Kidd points out, with that of prostatectomy. Prostatectomy is an operation which, when successful, provides a really radical cure, and promises a new lease of life and freedom from all future anxiety in the matter, whereas catheter life is merely palliative, and is attended by an ever-increasing inconvenience by day and by night, not to speak of the anxiety always lurking in the background as to what the ultimate issue may be, since the element of risk increases rather than diminishes as time goes on—risks from complications due to its use or incident to the still present tumour in the prostate. The already very low mortality of prostatectomy would be reduced almost to a vanishing point if the routine use of the catheter for diagnostic purposes were abandoned and the patients were submitted to operation at a far earlier stage than at present—namely, before there was evidence of impending or actually present renal inadequacy. As Watson and Cunningham well put it: "The medical attendant continues far too frequently to subject patients to catheter treatment until they are broken down and reduced to a condition in which surgical intervention must necessarily be attended by serious risk. In short, the patient is deprived of his best chance of having his life saved or prolonged." The chief risk of the operation, in fact, relates to the state of the kidneys—one of renal inadequacy brought about by indiscriminate and unnecessary use of the catheter for diagnosis and treatment. The speaker considered that all instrumentation by the practitioner in connexion with the urinary tract must henceforth be raised from the status of a trivial surgical manipulation to the level of a surgical operation, not to be lightly undertaken, and only comparable with the laying open of the peritoneal cavity. It should, therefore, only be performed with due regard to aseptic surgical technique from first to last. A brief description was then given of a simple but quite effective practical method by which this could be carried out in private practice.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Nov. 15th, Dr. A. Freeland Fergus, the President, being in the chair.—Mr. Henry Rutherfurd showed: 1. A gillie, aged 33, who by rupture of his right ligamentum patellæ in August, 1909, had been seriously handicapped in walking, rowing, &c. A plastic operation, performed in October, 1910, whereby the quadriceps muscle was split and a portion brought down and fixed to the tibia, had given a very satisfactory result. 2. A man, operated on six weeks ago for Habitual Outward Displacement of the Patella. Removal of the attachment of the ligamentum patellæ to the inner side of the tibia had resulted in much greater security in walking. Mr. Rutherfurd also described four cases of Acute Intestinal Obstruction, two of mechanical and two of non-mechanical origin. 1. A boy, aged 12, in whom the obstruction had resulted from an irreducible intussusception. An ileo-colic anastomosis was effected and the boy did well for a week, but obstruction recurred and it was found that the entire intussusceptum had sloughed. Death ensued from inanition. 2. A woman, aged 30, in whom the cause of obstruction was a volvulus, involving the cæcum, part of ascending colon, and lower part of ileum. Operation was followed by a good recovery. 3. A woman in whose case a fall from a chair was followed in three days by acute intestinal obstruction. This was relieved by making an artificial anus in the cæcal region. Two months later the abdomen was reopened and, the bowel being found normal, the artificial anus was closed. A year afterwards the patient was in excellent health. 4. A lad, aged 15, in whom the obstruction was apparently due to enteritis resulting from the eating of a large quantity of plums. Operation, in which the distended small intestine was opened in two places, was followed by recovery.—Dr. Alexander MacLennan reported three cases of Pancreatitis. 1. Chronic Pancreatitis in a woman, aged 34, operated on in January, 1911, for removal of gall-stones. These, with much gall-stone sand, were removed and the gall-bladder excised. The pancreas was found enlarged and of stony hardness, and microscopic examination of a small piece removed showed marked interstitial fibrosis with partial atrophy of the gland elements. 2. Subacute pancreatitis in a man, aged 59, with a history of recurring attacks of pain in the stomach, vomiting, and constipation. The last of these, accompanied by abdominal distension and tenderness, necessitated operation. The gall-bladder and splenic flexure of the colon were freed from adhesions, and stones were removed from the former and from the common bile duct. Fat necrosis was found in omenta and mesentery, and a piece of pancreas removed was found to be composed entirely of fat. The patient did well till the twelfth day, when a partial giving way of the abdominal wound allowed escape of bowel, with the result that peritonitis and death ensued. 3. Acute Gangrenous Pancreatitis in a woman, aged 59, with a history of old-standing constipation, abdominal distension, and epigastric tenderness, and of more acute pain with bilious vomiting and shivering for about a fortnight before operation. A diagnosis was made of acute pancreatitis and cholecystitis. The thickened and adherent gall-bladder was excised, and the pancreas, which was greatly enlarged, livid, and with necrotic patches, was punctured with forceps in several places and bled freely. Packing was left in for six days. Union was delayed beyond the tenth day, a circumstance apparently to be associated with the presence of fat necrosis. The patient ultimately made a good recovery.—Dr. W. F. Gibb showed a young girl from whose biceps muscle he had removed an unusual tumour of about the size of a hen's egg. The tumour, which was exhibited, was provisionally named a striped myoma, but its exact pathology had not yet been wholly determined.

BRISTOL MEDICO-CHIRURGICAL SOCIETY. — A meeting of this society was held on Nov. 13th, Dr. Walter C. Swayne, the President, being in the chair.—Mr. H. Elwin Harris, in a paper on a case of Congenital Pyloric Stenosis, the patient having died suddenly while under medical treatment, expressed the opinion that, in spite of statistics to the contrary, operation should be performed more frequently.—Dr. C. C. Lavington advocated early operation, and pointed to the presence of fatty stools, as a point in diagnosis, owing to the loss of the gastric acidity as a stimulus to the pancreas.—Mr. E. H. E. Stack was of the opinion that obstinate cases of vomiting in breast-fed infants were usually due to pyloric stenosis.—Dr. F. H. Edgeworth pointed out that the high mortality of operation cases was due to its limitation to the worst cases.—Dr. J. Michell Clarke read a paper on a case of Pyocyaneus Septicæmia, in which the organism had been isolated from the blood and fæces during life. The symptoms were mainly meningeal in type, but there was no meningitis post mortem, and no primary source of infection could be found.—Mr. G. Scott Williamson was of the opinion that bacillus pyocyaneus was not commonly found as a primary, but frequently as a secondary infection.—Dr. J. M. H. Munro and Dr. J. A. Nixon agreed that infections by this organism were one of the most favourable for treatment by vaccines.—Dr. Edgeworth stated that

he had cured a case of ulcerative colitis by a vaccine of bacillus pyocyaneus.—Dr. J. O. Symes, in a paper on a case of rheumatoid arthritis in a boy aged 4, characterised by a chronic course with intermittent fever, rigidity of spine, and knees with articular and peri-articular swelling and much muscular wasting, pointed out the close relation between rheumatoid arthritis and rheumatism. This was exemplified in this case by the occurrence of crops of subcutaneous nodules, and the isolation of the rheumatic diplococcus from the blood, spleen, and a lymphatic gland.—Dr. D. A. Alexander advocated the use of sulphur in large doses for cases of rheumatoid arthritis.—Dr. Carey Coombs agreed that pathologically and clinically cases of rheumatism and rheumatoid arthritis sometimes merged.—Dr. Nixon regarded the case as rather one of myositis fibrosa, the changes being mainly peri-articular.—Dr. J. M. Fortescue-Brickdale, in a paper on Gastric Superacidity, expressed the opinion that hyperchlorhydria was usually the result of a pathological condition, and seldom, if ever, a pure secretory neurosis.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Nov. 22nd, Dr. Joseph Dobson, the President, being in the chair.—Dr. Bedford Pierce read a paper on Psycho-Analysis, in which he outlined the principles, together with criticisms of this method of diagnosis, illustrating his points by reference to reports of clinical cases.—In the discussion which followed Dr. H. Devine (West Riding Asylum, Wakefield) urged the value of the method both in diagnosis and treatment.—Mr. R. H. Botham (Darlington) was of opinion that unless the mental attitude of the patient was changed in the process of psycho-analysis further treatment was necessary in the direction of re-education.—Dr. A. G. Barrs and Dr. J. R. Gilmour also spoke.—Dr. R. A. Veale showed a specimen of Malignant Disease of the Liver and Trachea. The growth was exceedingly vascular, and there had been spontaneous rupture of the liver during life. Histological examination proved the tumour to be an endothelioma.—Dr. Barrs showed a patient suffering from Intracranial Disease, in whom there were headache, double optic neuritis, and attacks of typical Jacksonian epilepsy, with indications pointing to a lesion in the neighbourhood of the left motor area. A decompression operation had been performed by Mr. J. F. Dobson, who had removed a portion of bone in the left temporo-parietal region, without, however, opening the dura mater, and marked amelioration of symptoms had resulted. Subsequently skiagrams had been taken by Dr. L. A. Rowden, and these were exhibited on the lantern screen. They showed a dark shadow of considerable size, apparently caused by a tumour springing from the inner face of the right temporal bone, and, in Dr. Rowden's opinion, probably of the nature of an exostosis.—Mr. Walter Thompson showed a case of Spontaneous Fracture of the Radius and Ulna, and a case of Spontaneous Fracture of the Femur. He was of opinion that syphilis was responsible in both instances.—Cases and specimens were also shown by Dr. C. Oldfield, Dr. Rowden, Mr. J. Basil Hall, Mr. J. F. Dobson, Dr. T. Churton, Mr. Alexander Sharp, Mr. G. Constable Hayes, Professor J. B. Hellier, Dr. J. Allan, and Professor T. Wardrop Griffith.

HARVEIAN SOCIETY.—A meeting of this society was held on Nov. 21st, the President, Dr. H. J. Macevoy, in the chair.—Dr. A. M. Gossage read a paper on Heredity. He pointed out that the subject of heredity was inextricably mixed up with that of evolution, and discussed the three chief theories of evolution—that of Lamarck, that of Darwin, and the Mutation theory. The evidence in favour of any of these was founded on the study of animals and plants, but they could be illustrated from human beings. Human evidence was, however, insufficient to establish any point. Lamarckism, or the inheritance of acquired characters, must be regarded as disproved by the work of Weismann. Between the other two theories it was at present impossible to decide. Darwinism failed to convince from the lack of conclusive evidence of evolution by the selection of fluctuating variations, while there were many difficulties to overcome and apparent exceptions to be explained before the Mutation theory and Mendelism could be definitely accepted.—Mr. Campbell Williams and Dr. E. G. Graham Little discussed the paper, and Dr. Gossage replied.—Mr. W. H. Clayton-Greene then read a paper on Some Bacterial Infections of the Urinary Tract.—Mr. D. C. L. Fitzwilliams, Mr. Campbell Williams, Dr. Sidney P. Phillips, and Dr. Little discussed the paper, and Mr. Clayton-Greene replied.

Reviews and Notices of Books.

Arthritis: A Study of the Inflammatory Diseases of the Joints. By PETER DANIEL, F.R.C.S. Eng., Senior Surgeon, Metropolitan Hospital; Surgeon to the Gordon Hospital. Edited by JAMES CANTLIE, M.A., M.B., C.M. Aberd., F.R.C.S. Eng., Surgeon, Seamen's Hospital Society. London: John Bale, Sons, and Danielsson, Limited. 1912. Pp. 515. Price 12*s.* 6*d.*

THE chronic inflammatory affections of the joints are in greater need of elucidation than almost any other group of morbid affections of the body, and we welcome cordially this work as a serious attempt to unravel the difficulties in this part of pathology. Everywhere the author expresses his own views, and therein consists the great value of the book; and though we may not accept *in toto* the opinions here set forth, we think that they are based on careful observation and deserve consideration.

We must express our approval of the manner in which the chapter on osteo-arthritis has been written. The author starts with the statement that the conditions which may be included under this name have been saddled with a very extensive and a very troublesome nomenclature. He proceeds to state that all these conditions, however much they may differ from one another, are due to one cause—namely, toxæmia, modified by the conditions which are due to individualism, environment, slight injury and previous inflammation in the joint, and especially by the situation and the exciting cause of the septic process. He considers that the classification usually accepted is purely arbitrary. We are given in a tabular form the differences of opinion of standard writers on the subject and the opinions held by the author, as to both etiology and symptoms. More than 200 pages are devoted to the subject of tuberculosis of joints, and here also we see the impress of an originality, founded, however, on observation and experience.

There are many points on which differences of opinion may reasonably exist, and we cannot concur in all the views expressed by Mr. Daniel, but there is much to be said for the opinions set forth here, and they deserve study.

A Text-book of the Practice of Medicine. By JAMES M. ANDERS, M.D., Ph.D., LL.D., Professor of Medicine at the Medico-Chirurgical College, Philadelphia, &c. Tenth edition, thoroughly revised. Illustrated. London and Philadelphia: W. B. Saunders Company. Pp. 1328. Price 24*s.* net.

Professor Anders's book, from its comprehensive and thorough character, has deserved the success of a tenth edition, to which it has attained. It is practical in its aims, and since the subject matter is carefully and clearly arranged it is a useful and instructive text-book.

The present edition has been thoroughly revised and brought up to date by the inclusion of numerous recent advances to which in many instances the reference is given in footnotes. This revision must have necessitated a very wide examination of special monographs, pamphlets, and journals, since many of the matters mentioned have as yet found their way into but few text-books. This feature, together with the continuity of method and point of view given to the book by the fact that it is the work of one man who has obviously had a wide experience of the practice and teaching of medicine, gives a special character to it and increases its usefulness. Questions of diagnosis and treatment are discussed with special care and in considerable detail. Tables illustrating the most important points in the differentiation of diseases with many similarities are not infrequently given, as well as careful statements in regard to pathognomonic and significant symptoms and signs. The

treatment of each disease is described in sufficient detail to be of practical value. The varieties of treatment available are separately considered and discussed. Where drugs are recommended doses are stated, and in many instances prescriptions are given.

In the preface a list is given of conditions, diseases, and tests introduced in this edition for the first time, and they comprise a considerable number of interesting and useful facts. Among these we may mention excision of the tonsils in acute articular rheumatism, as described by Gürich, the polycythæmia hypertonica of Geisböck, Falk and Tedesko's test in chronic tuberculosis, and Breur's and Freud's theories of hysteria, with the methods of treatment based upon them. There are a few plates, some of them coloured, illustrating rare or obscure conditions, or showing the appearance of blood films in some of the anæmias, and there is a good representation of the intracorpuscular stages of the malarial parasites.

We can commend Professor Anders's text-book as giving a practical and convenient review of the principal facts and theories in regard to medical diseases.

The First Signs of Insanity: their Prevention and Treatment. By BERNARD HOLLANDER, M.D. Freib. London: Stanley Paul and Co. 1912. Pp. 347. Price 10*s.* 6*d.* net.

IT is not an easy task to write a book in popular language which may appeal not only to medical men but to a wide circle of readers. The author tells us in his preface that such is his aim, and specifies his qualification for the task by remarking that the work is that "of a physician who has made a special study of the signs and symptoms of the *early* phases of mental disorder, and their successful treatment." Reading the book from the medical point of view, we are of opinion that the author's appeal is likely to fail, for the ideas which he presents, and which appear to him to be of a novel character, are trite to anyone having any sort of acquaintance with psychiatry. As to the book from the popular standpoint, we do not think it would be useful.

In an introduction the author recounts that which we suppose must be taken to be his unfortunate experience in regard to private and public asylums. He asserts of the latter that "the scientist in search of material for earnest work is met at the portals of the asylum with an emphatic negative," while of the former he alleges that "one serious grievance is that their owners can refuse admission to the consultant who comes to see whether the patient is well enough to be removed to more favourable surroundings." Such experiences we imagine to be highly unusual.

The Accessory Sinuses of the Nose in Children. 102 Specimens reproduced in Natural Size from Photographs by Professor Dr. A. ONODI, with a Preface by Professor Dr. W. WALDEYER. Translated by CARL PRAUSNITZ, M.D. London: John Bale, Sons, and Danielsson, Limited; Würzburg: Curt Kabitsch. Pp. 23 + 102 plates. Price 21*s.*

NOT many years ago the accessory cavities of the nose were clinically a *terra incognita*. Through patient researches, for which we are in no small measure indebted to Professor Onodi, that region has been opened up, so that we are now in possession of precise knowledge of the anatomical and pathological conditions peculiar to these cavities in the adult. But an exact study of the origin, the process of development, and the physiological bearings of the pneumatic cavities in the child hitherto has been untilled ground. The object of the present work, which has placed us under a further obligation to Professor Onodi, is to study the development of the air sinuses from their first appearances till after puberty. The research is placed before the reader in a series of 102 plates of photographs of specimens removed from skulls of infants and children of different ages. The specimens have been cut into sections in three planes of the body—the coronal, the longitudinal, and the horizontal planes. The photographs are of natural size. On the left-hand page facing each plate there is given a concise and lettered description of the specimen, together with accurate measurements. The description is given in German, French, and English, the result being that an excellent demonstration is afforded of the gradual development of the frontal and sphenoida sinuses, of the anterior and posterior ethmoidal cells, and of the maxillary antrum.

The work will be found to be of the greatest value, not only in the study of the development and physiology of these cavities, but also in the diagnosis and operative treatment of the diseases that bring their existence under notice.

Maladies de la Vessie et du Penis. Par M. LEGUEU, Professor Agrégé à la Faculté de Médecine et Chirurgien des Hôpitaux, et E. MICHON, Chirurgien des Hôpitaux de Paris. Avec 90 figures intercalées dans le texte. Paris: J. B. Baillière et Fils. 1912. Pp. 324. Price 6 francs.

THIS is a section of the Nouveau Traité de Chirurgie, now approaching completion. In this volume the surgery of the bladder and of the penis have been bound together, mainly for convenience, for they are treated quite separately. The subjects have been dealt with very systematically. The authors have taken first the symptoms produced by the morbid conditions of the bladder and the methods by which the surgeon examines the organ. Then come successively the congenital malformations, the injuries, foreign bodies and calculi, cystitis, tuberculosis, and tumours; while lastly, the diseases of nervous origin are considered. The operations on the bladder are collected into one chapter, with the exception of lithotrity, which is described in the chapter on stone in the bladder. So far as the operations on the female bladder differ from those in the male they are described separately. The section on the penis is good.

The book is worthy of the treatise of which it forms a part.

Hypnosis and Suggestion: their Nature, Action, Importance, and Position amongst Therapeutic Agents. By W. HILGER, M.D., of Magdeburg. Translated by R. W. FELKIN, M.D., F.R.S.E. With an Introduction by Dr. VAN RENTERGHEM, of Amsterdam. Translated by A. NEWBOLD. London: Rebman. 1912. Pp. 233. Price 10*s.* 6*d.* net.

Dr. Felkin is to be congratulated for rendering Dr. Hilger's book accessible to the English-reading medical profession. Its pleasant and lucid style, its apt illustrations and instances culled from personal experience, its avoidance of the hackneyed and the commonplace, and its insistence on the essentials of psychical curative methods, combined with the author's incorporation of the results of wide and serious psychological research, make the volume unusually attractive. There may be risk of the physician's capacity for assimilation being depraved by the ceaseless output of works on psychotherapy in any of its forms, but we have no hesitation in recommending Dr. Hilger's book to his attention, for it is written by a man with a large general practice, and its point of view is definitely practical and at the same time scientific.

A chapter on the nature and methods of hypnosis and suggestion is followed by an interesting and instructive account of the relation of suggestion to the will, where it is shown how easily a condition of the organism which is imagined as coming on, and is expected with the fullest certainty and perfect belief, occurs in consequence of such

an idea. The significance of expectation is fully gone into, as well as the other factors of training, prefiguration, visualisation, and example, all of which may influence the carrying out of an act of seeming volition. Wherever it is desirable the author illustrates his contentions by actual clinical cases, and in addition he has a genuine facility in applying the facts of every-day life to support his views. The book is neither too long nor too intricate for the busy physician, but the writer never abandons scientific ground, nor, as the writer of the preface says, does he deck out his evidence with exaggerated accounts of the marvellous.

We can heartily recommend this book to the attention of the medical profession.

Ueber Scharlach (der Scharlacherkrankung Zweiter Teil). —Von Dr. DIONYS POSPISCHILL und Dr. FRITZ WEISS. Mit 14 Kurven. Berlin: S. Karger. Pp. 147. Price 5 marks.

THIS book is based upon a study of 3605 cases of primary scarlet fever observed by the authors in one of the infectious hospitals of Vienna. They state that the special feature of the epidemic observed by them consisted in the development after a definite interval from the initial manifestations of a series of manifestations, which they describe under the name of the second illness (*das zweite Krankseiη*). They consider its main features under the following heads: fever, glandular swelling, a second pharyngeal outbreak, nephritis, and the scarlet fever heart. All these features of "the second illness" are discussed in detail. They also describe certain unusual forms of this second illness, including a form with characters suggesting scurvy.

During the epidemic 2605 cases were observed by the authors in one of the children's hospitals of the city. A further 1000 cases occurring before this period were also passed under review by them in arriving at their conclusions. The general character of the epidemic was a mild one, the percentage mortality in the hospital being 5·52. It was, however, characterised by a peculiar course, in that after a definite interval from the initial manifestations of the disease, rarely in less than 14 days, a characteristic group of symptoms of greater severity than those of the original attack developed. It is to this complex of symptoms that Dr. Pospischill and Dr. Weiss gave the title of "the second illness." The general manifestations of this condition were fever, glandular swellings, pharyngeal inflammations, nephritis, and the scarlet fever heart. These symptoms are given in the order of their frequency, since they were not all present in every case, and they were subject to variation. A peculiar form with certain scorbutic features occurred and other atypical forms are described. The condition was early recognised in 709 cases among the 2605 of the actual epidemic—that is, in 27·22 per cent. Fever occurred in 91·9 per cent. of these, lymphadenitis in 49·6, and pharyngeal implication in 18·1. The authors indicate an interesting parallelism between this second disease and the serum disease after injection of serum, and discuss its significance in regard to the pathology of the disease. They regard scarlet fever as due to an unrecognised infective agent, and do not attribute any important activity to the streptococcus in its pathogenesis. The observations are of considerable novelty and interest and deserve to be widely known.

Other features of the epidemic which the authors pass under review are the return cases, the state of the heart, and of the joints. They also describe in some detail their observations upon the diet in scarlet fever, including an interesting inquiry into the effect of diet upon the incidence of nephritis. Some of the cases were treated by an exclusive milk diet, while others were given a diet comprising either meat, meat extracts, or bouillon. They found no difference in the incidence of nephritis in the two groups, and no alterations in the severity of the affection when it developed. In regard to treatment, they saw no useful results from the use of polyvalent anti-streptococcus serum in scarlet fever, and they inveigh strongly against the suggestion that the infective agent in scarlet fever is the streptococcus.

The book is an original and suggestive contribution to the literature of the disease.

Diagnose und Fehldiagnose von Gehirnerkrankungen aus der Papilla Nervi Optici. By Professor Dr. FR. SALZER, Munich. With 29 coloured illustrations on two plates. Munich: J. F. Lehmann. Pp. 16. Price 1.50 marks.

WHEN the student of ophthalmoscopy has overcome the initial difficulties attending the use of a new optical instrument he is confronted in a peculiarly acute manner with the further difficulty of distinguishing between normal and pathological appearances. The variations in the appearance of most normal organs are comparatively slight. The appearance of the optic disc, on the other hand, is various in different perfectly healthy individuals. Unusual redness or pallor, blurring of the edges, swelling or depression, marginal pigmentation, and so on, are all suggestive of pathological states, yet all in slight degree are consistent with perfectly normal function. It is not always easy for an expert ophthalmologist of the widest experience to be certain whether a given disc is normal or abnormal; much less so is it for the tyro, or even the accomplished physician who uses the ophthalmoscope only occasionally in the diagnosis of certain groups of cases. To the latter particularly we cordially recommend the perusal of this little pamphlet. Here each of the features mentioned above is considered in turn, and a series of admirable coloured drawings of discs illustrates the various peculiarities. We feel sure that the physician who has carefully studied these drawings in the light of his own experience will hesitate to talk in the loose manner which is only too common about the "hyperæmia" of this disc or the "slight congestion" of that. No less than eight normal discs are depicted showing variations in colour such as the ophthalmologist is quite familiar with. Pseudoneuritis is a condition which may baffle the most experienced, and in these cases there is often nothing to be done but to wait and see. The author does not, perhaps, lay sufficient stress upon the distortions produced by astigmatism and other optical defects of the eye.

The brochure is an appendix to Weygandt's Atlas of Psychiatry, and is, therefore, intended especially for neurologists.

LIBRARY TABLE.

The Yellow Fever Bureau Bulletin. Vol. II., No. 1.—This bulletin having completed its first year of issue, has been considerably enlarged and extended; it now deals not only with yellow fever, but also with two other diseases—namely, dengue and pappataci fever—there being, it appears, grounds for believing that the organisms of all are allied, some authorities classing them in the same natural group. This first number of Volume II. of the bulletin comprises 120 pages of printed matter, and appended is a long list of publications relating to pappataci fever, a similar list respecting dengue being promised in the next issue. The editor, Dr. Harald Seidelin, has been absent from this country for some time on an expedition to the Mexican province of Yucatan to study the local conditions associated there with yellow fever, which, always endemic in that region, had become epidemic during the autumn and winter of 1911–12. It is intimated in an editorial note that in the

next number of the bulletin Dr. Seidelin will furnish a complete report upon his recent investigations in Mexico. Meanwhile, it is stated briefly that his late researches have fully confirmed the earlier observations he had made upon the etiology of the disease. The paraplasma flavigenum, which he regards as the specific organism of the malady, was found in the blood of all of 16 cases carefully investigated by him and clinically diagnosed, with one exception in which the patient was not seen until he was convalescent. The same organism, the so-called "yellow fever body," was also found in a certain number of febrile cases which had no very definite symptoms of yellow fever and which were of short duration, but which corresponded very well with the mild forms of the disease described by many experienced observers. On the other hand, in several hundreds of other cases in which an elevation of the temperature was noted, but which were not suspected to have become infected by yellow fever, careful examination of the blood failed to discover any bodies identical with paraplasma flavigenum. In an interesting editorial note there is a discussion upon the reported outbreak of eight yellow fever cases on board the s.s. *Perou*, which arrived at La Guáyra, Venezuela, from Colon in the Panama Canal zone. On board the same vessel 15 further cases of the disease were subsequently reported on her arrival at Fort de France in the West Indian colony of Martinique. The diagnosis and probable origin of the cases are fully discussed. Some notes are supplied concerning recent appearances of yellow fever in various parts of the world, and a table is given showing all reported occurrences of the disease during the first half of the present year. A very valuable historical article upon Epidemics of Yellow Fever at Bermuda, by Surgeon Christopher Harvey, R.N., gives an interesting account of the various outbreaks of the malady which have occurred there from 1699 to 1869. A large amount of the material for this article was obtained from the records of the Royal Naval Hospital at Bermuda, this station having been long subject to importation of the infection from various quarters, including the West Indies and Central and South America. This article occupies more than half of the whole printed space in this number of the bulletin. Dr. Seidelin contributes an excellent paper on Pappataci Fever, in which he gives a good outline of the geographical distribution of the disease, its etiology, epidemiology, general pathology, symptomatology, and prophylaxis, so far as they are known. A review is supplied of a number of works relating to yellow fever, and a bibliography of recent publications on this subject is also appended. The second volume of the bulletin, it will be seen, has begun well, its first number containing a considerable amount of new and interesting matter.

The Annals of Tropical Medicine and Parasitology. Series T. M. Volume VI. No. 3A.—This number of the annals is devoted entirely to the publication of the third and fourth interim reports of the Luangwa Valley Sleeping Sickness Commission of the British South African Company, the reporters being Dr. Allan Kinghorn and Dr. Warrington Yorke. It may be remembered that in the two previous interim reports by these same experts brief references were made to various trypanosomes found in game and domestic animals in the vicinity of Nawalia, Northern Rhodesia; but as these communications dealt exclusively with a human parasite of sleeping sickness, Trypanosoma rhodesiense, no details were given concerning the other organisms encountered. The third interim report by Dr. Kinghorn and Dr. Warrington Yorke now considers at greater length the subject of trypanosomes which infect game and domestic stock in the Luangwa Valley. It was found that trypanosomes were of frequent occurrence amongst these animals and that one or other of six species of these parasites could be recovered from their blood—namely, T. rhodesiense, T. vivax, T. nanum, T. pecorum and two others of which T. montgomeryi was possibly one. The glossina morsitans fly in nature transmits two of these trypanosomes, T. rhodesiense and T. pecorum, and probably also transmits at least two others—namely, T. vivax and T. nanum. There is also circumstantial evidence pointing to the possibility that T. pecorum may be transmitted by biting insects other than tsetse flies. In the fourth interim report of the Commission Dr. Kinghorn and Dr. Warrington Yorke give the results of their experiments in feeding wild glossina morsitans flies upon healthy monkeys. These observers have now arrived at the conclusion that the following trypanosomes, T. rhodesiense, T. pecorum, T. ignotum (sp. nov.), and probably also T. vivax and T. nanum, are transmitted in nature by the glossina morsitans in the Luangwa fly Valley.

Hygiene for Teachers. By R. ALUN ROWLANDS, B.Sc. Wales, M.R.C.S. Eng., L.R.C.P. Lond., Demonstrator of Physiology at the London Hospital Medical School; with a Prefatory Note by LEONARD HILL, F.R.S. London: Edward Arnold. 1912. Pp. 356. Price 3*s.* 6*d.* net.—As physiology is the basis of hygiene, it is as difficult to say where physiology ends and hygiene begins as where the proverbial lamb ends and mutton begins. In this book about 250 pages are given to the more purely physiological part, with here and there shorter or larger paragraphs on the application of some of these matters to hygiene, while the remainder of the text, about 100 pages, is allocated to the more strictly hygienic subjects, such as Sanitation of the School, Disabilities and Diseases of Children, and Medical Inspection of Schools. After a short introduction, there is a chapter on the Skeletal and Muscular Systems. The illustrations of joints and ligaments do not strike us as up to the standard of some of the other illustrations, and, indeed, the same may be said of some of the histological woodcuts, both in this and other parts of the book. As to the microscopic diagrams, there is nothing to show the scale of magnification. Under Muscle, the question of physical training is set forth, and the syllabus of the Board of Education on this subject is commended for study. The Digestive System, which occupies about 50 pages, contains not a few points that are open to criticism. For instance, enzymes can hardly be said to be "killed" by heat; and it is doubtful if a "stiff brush" is the best for cleansing the teeth. Under Circulation it is stated that the flow is very rapid in the small arteries. It might be well to state the exact rate and how the illusive idea of rapidity is obtained. Under Respiration, a short account of breathing exercises, adenoids, and the advantages of open-air life is given. Personal cleanliness, heat loss, and clothing are introduced under Excretory System. In Fig. 77—section of the skin—the erector pili muscle seems to be on the wrong side of the hair follicle, but perhaps it belongs to a follicle not shown in the drawing. To the Nervous System about 30 pages are given, which include a few pages on mentally defective children; the conditions associated with, the causes, detection, and tests for, mental deficiency and the treatment of backward and feeble-minded children. Another 30 pages are taken up with the Relation of the Senses to the Nervous System—their Training and Development. Eyestrain and defective vision are sufficiently treated. In the chapter on Hearing the teacher might easily be misled as to the size of the ear ossicles by looking at the diagram Fig. 100. The matter on sanitation of schools is excellent and well illustrated, and what is said on disabilities and diseases of children will prove most useful.

Apart from the few shortcomings which we have indicated, the work seems to us well adapted for the wants of teachers of hygiene.

The Practical Medicine Series. Volume III. The Eye, Ear, Nose, and Throat. Edited by CASEY A. WOOD, C.M., M.D., D.C.L., ALBERT H. ANDREWS, M.D., and GUSTAVUS P. HEAD, M.D. Series 1912. Chicago: The Year-Book Publishers. Pp. 358. Price $1.50.—This volume is one of a series of ten issued at about monthly intervals, and covering the entire field of medicine and surgery. Each volume is complete for the year prior to its publication on the subject of which it treats. Nearly half of the present volume is devoted to diseases of the eye; the remaining 184 pages of text are occupied with diseases of the ear and of the nose and throat. The series is published primarily for the general practitioner, but the arrangement in several volumes enables those interested in special subjects to buy only the ones they desire. The present volume in the form of abstracts of subjects treated of in the literature is a useful retrospect of a year's work which is rendered accessible by good indices to subjects and authors.

JOURNALS AND MAGAZINES.

The Quarterly Journal of Medicine. Edited by WILLIAM OSLER, J. ROSE BRADFORD, A. E. GARROD, R. HUTCHISON, H. D. ROLLESTON, and W. HALE WHITE. Vol. VI. No. 21. October, 1912. Oxford: At the Clarendon Press. Subscription price 25*s.* per annum. Single numbers 8*s.* 6*d.* each.—The contents of this number are: 1. Catarrhal Jaundice, Sporadic and Epidemic, and its Relation to Acute Yellow Atrophy of the Liver, by E. A. Cockayne. Infectious jaundice or Weil's Disease is differentiated from epidemic catarrhal jaundice. The former is regarded as in all probability due to the ingestion of contaminated, water or food, or is possibly due to some biting insect while epidemic catarrhal jaundice is air borne. Simple catarrhal jaundice is the sporadic or endemic form of epidemic catarrhal jaundice. Acute yellow atrophy in the great majority of cases is probably due to the same organism acting on a liver weakened by some temporary strain. 2. The Action of Diastase in Diabetes Mellitus, by Owen T. Williams and P. Mildred Powell. It was found that in the prolonged daily study of cases of diabetes treated with diastase there were no beneficial effects which could be attributed to it. The writers conclude that if there is any specific body in oatmeal which has any effect on carbohydrate metabolism, it is not a diastase ferment. 3. The Action of the Vagus on the Human Heart, by W. T. Ritchie. It appears that the action of the vagi on the human heart is closely comparable to that of the vagi on the heart of the mammals. Compression of the right vagus may depress the rate and strength of the auricular beats, may prolong auricular systole, and may depress the conductivity of the auriculo-ventricular bundle system. The inhibitory effects of left vagus compression are as a rule less effective than those of right vagus compression. 4. Investigations on the Gastric Juice in Malignant and Non-malignant Diseases of the Stomach and Duodenum, Part I. (On a Peptolytic Enzyme of Gastric Juice), by S. B. Schryver and Charles Singer. They found that in about 6½ per cent. of cases of grave gastric disorder a ferment is present in the gastric juice which is capable of hydrolysing Witte's peptone. This abnormal ferment is of unknown origin. It has only been detected in cases with severe dyspeptic symptoms. It is not peculiar to, nor characteristic of, gastric carcinoma, and the commonest condition associated with its presence appears to be gastric dilatation with atrophy of the walls of the stomach and thinning of the mucous membrane. 5. The Influence of High Temperature on Protein Metabolism, with Reference to Fever, by George Graham and E. P. Poulton. The general conclusions arrived at are that a rise of temperature to 104·3° F. does not by itself cause any breakdown of the proteins of the body. If a diet of very high caloric value is taken which contains a large excess of carbohydrates but a minimal quantity of protein, non-nitrogenous substances supply the whole of the increased energy production set up by the high temperature. If a diet of ample caloric value be taken, which contains no carbohydrates but a large excess of protein, the fat metabolism is increased, but it is probable that the protein metabolism also takes a small share in the increased energy production set up by the high temperature. If a diet of insufficient caloric value be taken, which contains practically no carbohydrates but a fair amount of protein, the fat metabolism is probably greatly increased, but the protein metabolism takes no share in the increased energy production set up by the high temperature.

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(1) COLLOIDAL SELENIOL; (2) COLLOIDAL RHODIUM.
(CH. COUTERIEUX, 57, AVENUE D'ANTIN, PARIS, AGENTS.)

(1) REFERENCE was made in our columns of May 18th, 1912, to the treatment of cancer in the human subject by the intravenous injection of selenium in the colloidal form. We have received specimens of selenium colloid prepared by electrical methods which are used clinically in a way described by André Lancien before the Société Médicale des Hôpitaux de Paris. The trials so far reported in Great Britain have given negative results. Dr. Charles E. Walker, of the research department Glasgow Cancer Hospital, stated in THE LANCET of May 18th, 1912, page 1337, that colloidal selenium is not toxic, for 0·25 c.c. injected into mice and 1 c.c. into rats did not produce any ill-effects—no result whatever was observed upon the tumours in either mice or rats. It was Professor Wassermann who announced that by the intravenous injection of a compound of selenium and eosin small cancerous tumours produced by inoculation in mice were cured. This announcement, no doubt, led to the preparation of electric colloidal selenium, but we are not aware of any results which indicate that this preparation has been put upon extensive trial. (2) Electric colloidal rhodium has been employed as an intramuscular or intravenous injection in infectious diseases, and particularly in typhoid, malaria, rheumatism, and secondary infections of phthisis. The colloid is sold under the name of lantol in ampoules as well as in capsules with a keratine coating, which, of course, are soluble only in the intestinal secretion. The suggestions arising out of the use of these so-called therapeutic ferments are interesting, but it is desirable to obtain the evidence of extended trials, as well as the results of application in disease, before admitting them to the rank of clinically effective agents.

TÃO CHOCOLATE.
(F. JAHN AND CO., LIMITED, 16, LONDON-STREET, LONDON, E.C.)

This chocolate provides an inoffensive way of administering a laxative. It contains amongst other things agar-agar, which tends to swell up in the bowel, promoting absorption of liquid from the digestive tract and hence peristalsis. In addition, the chocolate contains a preparation of the soya bean, which contributes nutritive properties. The suggestion upon which this formula is based seems

rational, and there is nothing drastic in its therapeutic properties, but it has a certain mild aperient effect. Analysis showed protein 9·34 per cent. and fat 31·20 per cent.

NOVATOPHAN.

(A. AND M. ZIMMERMANN, 3, LLOYD'S-AVENUE, LONDON, E.C.)

The attention of the profession may well be drawn to this new preparation, since claims are made for it in favour of its exerting an influence on uric acid metabolism, securing the elimination of that acid. We have already referred to atophan, which is a molecular combination of phenylchinolin (2) and carbonic acid (4). Novatophan is described as the ethyl ester of methylated atophan, which is equal in clinical effect and action to the former product, but without its bitter taste. It is a colourless preparation and insoluble in water. The dose is from 45 to 75 grains daily, the simultaneous administration of sodium bicarbonate being recommended. Statements are quoted favouring the use of this compound in rheumatism and gout and in various forms of neuralgia.

POMVITA.

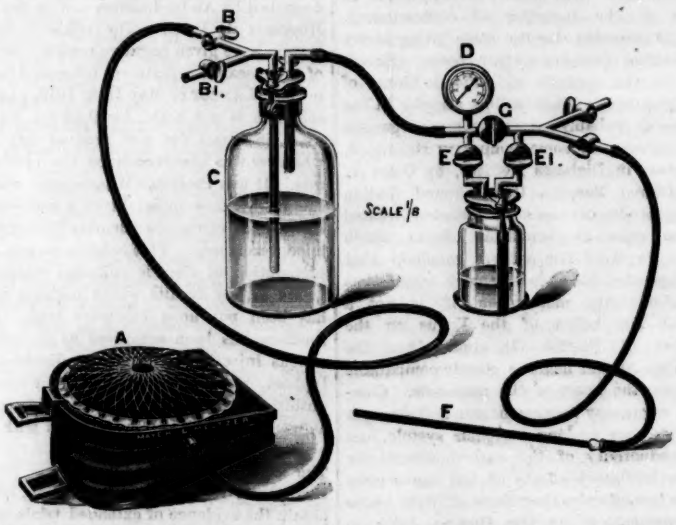
(H. WHITEWAY AND CO., LIMITED, THE DEVON CIDER HOUSE, 22 AND 23, ALBERT EMBANKMENT, LONDON, S.W.)

This is an agreeable "apple wine," and we have no doubt of its genuineness. It contains the ordinary constituents of apple juice, which has been fermented. Its alcoholic strength is about that of claret, and it is somewhat sweet to the taste, analysis showing, in fact, a proportion of 12·40 per cent. of apple sugar. The wine was in sound condition, its "appley" flavour being a particularly attractive feature. Analysis gave the following results:—Alcohol by volume, 11·61 per cent., extractive matters, 16·60 per cent., malic acid, 0·82 per cent., mineral matter, 0·65 per cent. As is well known, the salts in cider tend to produce an alkaline condition of the blood, and no doubt the observation that cider in moderate quantities suits gouty patients has some basis of explanation in this fact. We failed to find any objectionable preservatives in this apple wine. It makes a pleasant refreshing beverage mixed with aerated water.

New Inventions.

INTRATRACHEAL ETHER APPARATUS.

THE illustration shows an apparatus that has been devised by Mr. G. E. Gask and myself for the intratracheal insufflation of ether. Air is driven from the bellows A, through hot water in the bottle C (the tap B is for air, and B1 is a reserve tap for oxygen if necessary). The air then passes through E, over the surface of the ether in the smaller bottle, and so on to the gum-elastic catheter F. When it is desirable to give air without ether, E E are turned off and G is turned on. By regulating these taps it is quite easy to have either the whole or part of the air laden with ether vapour. The manometer D registers the pressure under which the air is driven into the trachea.



The apparatus and the method of maintaining anæsthesia are mainly intended for intrathoracic operations, which in the past were only possible with the aid of negative pressure cabinets. But these intrathoracic operations can now be performed, and anæthesia maintained with safety by means of the intratracheal insufflation of ether. The method of administration is as follows:—The patient is first anæsthetised, and then the catheter is passed through the vocal cords down to the bifurcation of the trachea. Air laden with ether vapour is then pumped in at varying pressures according to the necessities of the case. By this means it is possible to produce an excellent type of anæsthesia, which has the great advantage of being quite safe, since by pumping in pure air the patient can be easily and rapidly restored to consciousness. Indeed, it is held that when once the catheter is in position there is a perfect form of artificial respiration, for the lungs can be aërated at will. Although this method is mainly intended for use in intrathoracic operations where it may be necessary to allow the lungs to collapse during the operation, and then subsequently at the end of the operation to reinflate them when the pleura is being sewn up, I think that the method is quite likely to be of great service for the removal of goitres. My experience in this type of case is at present limited, but yet sufficient to lead me to think that the method is well worth an extensive trial. In making the apparatus all unnecessary complications have been avoided, the object being to make it simple, efficient, and easily portable.

These points have been admirably carried out by Messrs. Mayer and Meltzer, 71, Great Portland-street, London, from whom the apparatus can be obtained.

H. EDMUND G. BOYLE, M.R.C.S. Eng., L.R.C.P. Lond.,
Assistant Anæsthetist to St. Bartholomew's Hospital.
Upper Wimpole-street, W.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 30, 1912.

The National Insurance Act: the Position of the Voluntary Hospitals.

THE result of the conference which has been taking place between the Chancellor of the Exchequer, assisted by Mr. MASTERMAN and the Insurance Commissioners, and the five representatives appointed last week by the Representative Body of the British Medical Association, is not likely to be made public for some days. The outcome of the meetings between the Government and the representatives of the Association will take the form of a memorandum from Mr. LLOYD GEORGE, which will be presented to a special meeting of the Council of the Association next week, and afterwards published for the information of the constituency. It would be wrong for the profession to draw any conclusions or to take any action upon surmises. This week, however, a very prominent side in the working of the National Insurance Act may be considered with profit.

The very important subject of the position which the voluntary hospitals will occupy under the National Insurance Act has not, perhaps, received from the medical profession the attention which might have been expected, considering how vital to our professional needs, and to the public welfare, is the maintenance of our great hospitals in their present condition of efficiency and at their high level of educational value. The effect of the National Insurance Act upon the voluntary hospitals has no doubt been somewhat relegated to the background by the belief that to a certain extent their position will be dependent upon what sort of agreement, if any, the Chancellor of the Exchequer is able to arrive at with the medical profession, but as a matter of fact, whether a supply of medical men is or is not forthcoming to work the Act, the future of the hospitals is almost equally affected. Making no attempt to do more than state the broad issues, we may take it as fairly sure that under the Act a larger number of persons will require hospital treatment in the wards, which is the most expensive part of hospital dispensation, while a fewer number of persons may attend the out-patient practice of hospitals, which will in no proportionate degree lessen the expenditure of the institutions. A second point is that out of the mass of patients presenting themselves for treatment at the hospitals (this mass, of course, including both the admissions and out-patient attendances as they now are and the added admissions and attendances which will accrue under the Act) a very large proportion will be insured persons. Out-patients having to their credit a certain amount of money, supplied not only by themselves but by their employers and the State, wherewith to defray some part of the cost of their treatment, are not suitable objects for charity. Our voluntary hospitals were designed for the relief of the sick poor. In extension of this principle and commensurate with our developing civilisation we have classed, and rightly classed, under the head of "the sick poor" persons who are not necessarily penniless, but who cannot from their slender and often capricious resources be expected to meet the vast expense of modern medical and surgical care and relief. These are the two classes for whom voluntary hospitals are provided. In the new circumstances a large proportion of the patients at the hospitals will not be really indigent; indeed, they will be in actual possession of some provision towards the outlay on their medical or surgical treatment. In this position is it possible for the voluntary hospitals to come to any common method of procedure which should at one and the same time preserve for these institutions their existing and noble prerogative of undertaking the voluntary charge of the sick poor, and yet protect the institutions from abuse? Can the hospitals receive subsidies from the representatives of insured persons and remain free to discharge their high scientific and educational objects untrammelled by interference which would necessarily be only too often ill-directed? Can they do this without a fatal strain upon their pecuniary resources? Further, can they do this and actually benefit through a regular increase of income under the forthcoming condition of things?

There is no one who can answer these questions with any certainty of being right. But a great deal of information from which conclusions, unfortunately more or less mutually contradictory, can be based was brought forward at the recent meeting of the British Hospitals Association held in Birmingham on Sept. 19th and 20th, 1912. The subject was dealt with directly in the paper of Dr. NATHAN RAW on the Probable Effect of the Insurance Act on Voluntary Hospitals and other Institutions; in that of Mr. T. BASIL RHODES on the Voluntary Hospitals and the National Insurance Act; and in that on Hospitals and the State, contributed by Sir WILLIAM COLLINS. Mr. RHODES, who is secretary and house governor of the North Staffordshire Infirmary, Stoke-on-Trent, described in his paper a system by which the working men and women, subscribers to this institution, obtain direct representation upon its general committee and ascribed to it results of a striking character. He spoke of a sum of £7200 as representing the workers' contribution to an annual income of £14,000, and told how, in response to an appeal for £35,000 for structural improvements, £15,000 had been promised and £13,500 already paid by working-class supporters. This may represent the maximum of support given anywhere by the working-classes to a hospital; at all events, in many places their contributions are on a far smaller scale. Mr. CONRAD THIES, the secretary of the Royal Free Hospital, London, in the debate upon Mr. RHODES'S paper, called attention to the very different conditions prevailing in the metropolis. He found the direct contributions of the workers in London, subscribing as such, to be hardly large enough to be taken into consideration when compared with the organised self-taxation

described by Mr. RHODES. In estimating the possibility of falling subscriptions under the National Insurance Act, varying conditions of this kind will clearly have to be taken into account, and also the varying motives which will affect different classes of subscribers. The classification suggested by Mr. RHODES apportions the supporters of voluntary hospitals thus: I., Employers; II., employed persons; while I. can be divided into (*a*) private individuals who, whether in their businesses they may be large employers of labour or not, in their subscriptions and bequests to hospitals are actuated purely by benevolence; and (*b*) employers giving as such, with benevolent motives, but also having an interest in the fact that their employees are benefited by the institution subscribed to. In the different classes there will be some to whom taxation under the Insurance Act will mean an appreciably lessened power to give to hospitals; and there will be many people who will exaggerate, perhaps involuntarily, the diminution of their resources, or who out of annoyance at the imposed tax will cease their subscriptions. Particularly in I.*a* and I.*b* there will be persons who fail at first to appreciate the fact that the Act does not provide directly hospital treatment under the heading of medical benefits, and will cease subscribing to the charity thinking that the State has given to the insured all that they require, as well as more than they had before. Others again will hold that, because the State has gone so far as it now has, it ought to go farther and provide all that is needed for a large class of persons immediately above that for which the Poor-law is, or should be, responsible. It is the idea that there should be included under medical benefits suitable institutional treatment which is likely to increase in force, and thus to threaten the existence of the voluntary hospitals as such.

So much is this the case that the attitude of the supporters of the Act towards the voluntary hospitals is capable of the explanation that they have thought it to be time that the voluntary system should be replaced by one of support from public funds, but were unwilling to take upon themselves openly and directly the responsibility for a revolution, where the work of reconstruction is likely to be difficult, costly, and in its result unsatisfactory. Sir WILLIAM COLLINS, in his paper on the Hospitals and the State, quoted his words when the National Insurance Act was introduced into the House of Commons, showing that the measure was badly understood in detail by those who applauded its character, inasmuch as they believed that its provisions would give to all insured persons full medical and surgical treatment, whereas the only means for supplying such benefits, in other than tuberculous cases, was to be through the arrangements of Insurance Committees with individual general practitioners. The services of the hospitals are largely resorted to by general practitioners in behalf of persons of the insured or insurable class, and it has been assumed that the institutions can be relied on in the future to discharge such benefits to the community, possibly even in a greater degree than before. We now know that in many of the voluntary institutions it is felt that the continuance of the work upon the old basis is well-nigh impossible. We are approaching very nearly the date fixed for the commencement of medical benefits, and its effect on the voluntary system is still a topic for speculation. We have, however, two apparently inevitable elements introduced by the new legislation that will make for change: diminished subscriptions and an increased demand for institutional treatment. The latter of these may be met in part at the expense of the funds accumulated under the Act by "arrangement with Insurance Committees," but there is nothing to show that the sums forthcoming will be sufficient to pay in full for the maintenance of insured persons in hospitals—to leave their medical and surgical treatment there out of the question. At the meeting of the British Hospitals Association the expressions of opinion recorded were principally those of medical men connected with hospitals, who were almost unanimous as to the peril threatening the voluntary system, and no less so as to the duty to conserve and strengthen this system as far as possible. There is, however, the dangerous and difficult point to be solved as to the treatment of the insured person in a hospital by a member of an honorary staff. Will payments made by insurance committees supply any contribution towards remuneration for professional services and on what scale? Dr. RAW, in the valuable paper to which we have already alluded, advocated payment by patients generally, while Mr. RHODES considered that in the case of an insured patient, sent to a hospital by a medical man, free treatment should be provided, and that cases could be otherwise dealt with where no medical recommendation accompanied an insured person coming to a hospital for treatment. Possibly many cases might be treated without making obtrusive the existence of the Insurance Act, but others must almost inevitably suggest to the honorary member of the hospital staff the question why should he exercise for nothing his skill upon a patient who is not a fitting "object of charity"—who, in fact, is insured under a system which is to spend a huge sum annually in supplying medical benefits for its subscribers! We feel confident that the medical profession will do nothing to hasten developments which would destroy a great system of voluntary charity of which the whole nation is rightly proud, but we are perfectly clear that it is no part of the voluntary hospitals to offer, through the gratuitous services of medical men, treatment to a class of patients that is in the aggregate a monied class—and when we say this we are perfectly aware that indirect emolument reaches many members of the honorary staffs of hospitals through their appointments.

The points suggested for consideration relate to the probable immediate effects which the Act may be expected to produce upon the hospitals alike with regard to their finances, with regard to their relations with their patients, and with regard to their relations with their medical staffs, and also to ultimate changes of system which may some day be the direct or indirect consequences of national insurance. These ultimate changes, if they take place, are likely to be of grave importance to the medical profession, which has interests at stake at least as valuable as any other section of the community. Confident prediction is at present hardly possible, and is not rendered more easy by the present situation with regard to medical service

under the Act. The net result of such discussion as those which took place at the conference of the British Hospitals Association does not go beyond the suggestion of changes likely to occur, and of their probable incidence. The effect of the Act most immediately anticipated by some but not by others is, naturally, the falling off of subscriptions from employers and employed persons who are now taxed by the State in order to provide medical benefits for the latter class. Combined with this there is likely to be an increased demand for hospital accommodation through insured persons who hitherto have not come under observation being found to require treatment which cannot be provided in their homes. As a result there may ensue a call for subsidy to hospitals from public funds, or the institution of State hospitals of a new type leading to a still further diminution of voluntary support to the present hospitals. The development of State or municipal hospitals may be attended by the treatment in them of a class of patients not limited to those for whom voluntary hospitals were provided and for which they have been maintained. Such developments as those indicated, if they take place, must markedly affect the future conditions of hospital practice, of medical and surgical practice generally, and of medical education, a matter which is emphasised by Sir DONALD MACALISTER in his Presidential Address at the opening this week of the sixty-sixth session of the General Medical Council. At the present time the action of the voluntary hospitals in respect of insured out-patients will be towards relegating them to the care of practitioners, save in exceptional cases or those of emergency. In respect of in-patients, we can see no good reason why the full average cost per bed per week should not be paid for them. They will remain thus, of course, the objects of medical charity while the staffs of the institutions are unpaid, a fact which appears to escape regularly the public attention. Sir HENRY BURDETT, in a trenchant series of articles in the *Hospital*, advocates *pro rata* payments to replace the actual sums expended by each voluntary hospital upon insured persons, and sees no risk to the voluntary system in adding sums for the remuneration of the medical staff.

Temperance Reform.

WE print this week an outspoken address recently delivered by the witty Dr. CHARLES MERCIER, in which he demands a more reasonable attitude towards drunkenness and drink. As those who disagree with him on other matters already know, he is a hard hitter, with a merciless eye for the weak spots in an adversary's armour. At the same time, like most vigorous controversialists, Dr. MERCIER sometimes overstates his case in the sheer joy of laying about him. Thus, when he essays to prove that England is now a sober nation, he invites the reply that public and aggressive drunkenness is not the only form of insobriety, and that tippling, so deadly in its results to both sexes, is still dangerously prevalent. It is not our purpose now to criticise in detail Dr. MERCIER'S arguments, illustrations, or arithmetic, nor to endorse or controvert his conclusions; but in publishing his address we must not be thought blind to the possible effects of such reasoning upon those who lack the strength to be temperate. The author himself, of course, recognises the danger of supplying clever arguments for the moderate use and enjoyment of alcohol, which coming from authority may be used by the weak to their undoing. However harmful the exaggerations of anti-alcohol enthusiasts may be, and however harmless the moderate drinking of moderate men, there are many whom society has to protect against themselves so far as it can, and we must bear in mind that a plea for reasonable temperateness may be twisted into a eulogy of Bacchus, unless it is made quite clear to whom it is addressed and with what reservations. With Dr. MERCIER'S contention that the proper attitude for medicine to take up is not one of violent abuse of alcohol, but of patient investigation into the causes of drunkenness, we entirely agree, and we share in his dislike of intemperance of language whether in the cause of sobriety or of anything else. To his question, "How do you know that there is an immense number of drunkards that escape conviction?" we should answer by referring him to the London County Council statistics (Vol. XVIII.). During the year 1906 we learn that 55,515 were apprehended in the county for drunkenness, and the total of persons apprehended in the whole of the United Kingdom must have been much higher. Granted that the number is much made up by frequent offenders, we still receive Dr. MERCIER'S figures with reserve.

Quite another aspect of the whole subject was brought out in the Lees and Raper Memorial Lecture, delivered recently at Norwich by Sir ALFRED PEARCE GOULD, who made an original and apparently practical suggestion, looking towards the promotion of true temperance reform. After reviewing the physiological aspects of the matter, and emphasising the fact that there are three prevalent conditions that make the subject very difficult to deal with—viz., that the production of alcoholic beverages is a source of great wealth to those engaged in it, that necessity for the State to control the drink trade has created a State interest in the property, and that there is a tendency towards general resistance to State interference with personal habits, the lecturer again insisted on the oft-repeated fact that the laws of a democracy cannot be wiser or better than the general sense of the community. Legislation, therefore, should be secondary in time and influence to that change of public feeling of which it will be the expression. As to the still prevailing non-acceptance of the arguments, physiological and otherwise, against the use of alcoholic drinks, in spite of educational crusades by temperance reformers, Sir ALFRED PEARCE GOULD points out that "whenever we are taught by one who has some ulterior object in view beyond the mere imparting of information—to win an adherent to some party, to secure a disciple, to effect a vote—the instruction given is relegated to a secondary place in the recipient's life. The personal influence of the teacher or the power of association may assert itself and effect its immediate purpose, but the impelling force of such teaching is slight and transient." In the National Insurance Act, however, Sir ALFRED PEARCE GOULD sees the opportunity of making a great, almost national, experiment on the influence of alcohol on the human body. While certain benefits of the Act are guaranteed by the State and

are uniform for all men and all women, there are in addition certain "additional benefits," uncertain in amount and dependent on the healthiness of the members of individual approved societies. The true success of the Act, he says, will be measured, not by the financial and material help it gives in time of sickness, but by the degree to which it prevents sickness and disablement and promotes speedy restoration to health of those who are stricken. It will thus be expressed in terms of the amount of "additional benefits" which the assured will receive, for that will be dependent on the surplus remaining after the primary benefits have been fulfilled.

If the claims made for the benefits of abstinence from alcoholic drinks are correct, the abstaining members of any Approved Society should make smaller demands on the Insurance Fund than the non-abstainers, and therefore should accumulate funds for additional benefits at a greater rate than the non-abstainers. If it is true that the duration of sickness among abstainers is only about one half as frequent as that among non-abstainers, and that their mortality is nearly 50 per cent. lower, it follows that abstainers and non-abstainers ought not to be grouped together under the Insurance Act, and the "additional benefits" due to abstainers be absorbed in the greater sickness and invalidity benefits paid to the drinkers. Not only in the name of justice, therefore, but also with the view of enforcing the ill effects of alcohol in health on the attention of the people, it can be urged by temperance reformers that in any future Amending Act there should be a clause enacting that the members of Approved Societies shall be grouped into two sections, abstainers and non-abstainers from alcoholic beverages, and that the funds accumulated by each section for "additional benefits" shall be credited to, and available for, the members of such section only. Then, if each Approved Society reported annually how many members it had in each section, what percentage of sickness benefit had been paid to the members of each section, and what "additional benefits" the members of each section had thus secured, it is obvious that the results, if viewed over a sufficiently long period of time, would prove an invaluable object lesson. These suggestions which Sir ALFRED PEARCE GOULD makes with considerable force are worthy of all attention by others than avowed advocates of total abstinence.

ROYAL SOCIETY OF ARTS.—The opening meeting of the 159th session of the Royal Society of Arts was held on Nov. 20th, when an address was delivered by Lord Sanderson, vice-president and chairman of the council. In the course of this address, which dealt mainly with questions arising out of the great development of international intercourse during the last 70 or 80 years, he expressed the opinion that international exhibitions were among the good things of which it was possible to have too much, for, as at present organised, they were exhausting both to exhibitors and to spectators. Art had also in many instances suffered rather than benefited, so far as beauty was concerned, by the introduction of easier methods and the discovery of fresh materials. After a discussion of the various causes of wars, he argued that the development of international intercourse had been beneficial to the great mass of the population in civilised countries.

Annotations.

"Ne quid nimis."

MEDICAL CONTRACT APPOINTMENTS ABROAD—A WARNING.

THE circumstances of life in these islands are leading to an increase in the exodus of educated men to our colonies and dependencies and to the United States. We are now, consequently, quite frequently consulted as to the opportunities for medical practice in all parts of the world. Various industrial concerns—e.g., planting, mining, manufacturing, land colonisation, and railroad enterprises—seek medical officers to undertake the medical care of those employed on the estate or works and their dependents, and year by year more eyes seem to be turned towards such appointments. In this regard, a medical man occupying a position of this kind in North Borneo has written to us a letter on contract practice, in which he gives some very sound advice as far as appointments in the Far East are concerned, advice which, *mutatis mutandis*, might be followed by every intending medical emigrant. First, he insists that an intending candidate for a post should satisfy himself of the adequacy under local conditions and from the European standpoint of comfort of the salary offered, particularly with reference to the cost of living in the part to which he thinks of going. "Speaking generally," he says, "food and clothing cost at least 10 per cent. more anywhere east of Suez than in Europe. In Hong-Kong and Shanghai one can reckon on an extra 15 per cent., in Singapore and the Federated Malay States about 20 per cent., and in British North Borneo about 30 per cent. above European prices." The fact that it is very difficult to obtain native Indian doctors holding registrable qualifications for a lesser salary than £350 per annum is suggested as an indication of the minimum that a European practitioner should demand in any of the named countries, and in our opinion a higher salary could be asked with perfect justice. Another most important point is a careful consideration of the terms of the agreement before proceeding abroad. He is alluding to the East, but wherever the medical man's destination may be the same caution should be observed. A suspicious scrutiny should be made of any "make-weight" advantages offered, the most common of which kind of bait is the right to private practice. There may be no one outside of those whom he is engaged primarily to attend to afford opportunities for private practice, or those that there are may afford him plenty of practice but no remuneration. Cases are not unknown when a medical man who has been granted such a privilege in his agreement has been sent away up country to an absolutely isolated station, where his only private patients consist of wandering natives whose only worldly possessions consist of a loin-cloth and a few betel nuts. Another, and most insidious, danger is the customary clause placing the medical officer entirely under the orders of some manager. Judged from the managerial viewpoint, this may appear an essential proviso, and if the manager is a man of education and tact it will work all right with a medical man of like qualities. But if the manager should be wanting in these qualities the position may be intolerable. Apart, altogether from its importance from a merely social point of view, it is of the utmost importance for the medical man to keep on good terms with the manager; yet the majority of applicants for such posts have no means of knowing what sort of a man this future arbiter of their fate will prove to be

until they have surrendered their freedom. The most satisfactory type of planting practice in the East, according to our correspondent, whose letter has suggested these remarks, is that in which a doctor attends to a group of estates. In such cases he usually lives in the nearest town and enjoy the same liberties as an ordinary civil resident, visiting the estates by rail or launch at times stated or on emergency summonses, the daily medical supervision of his patients being carried out by Asiatic apothecaries acting under his orders. But even in these cases a short determining clause in the agreement is necessary, otherwise in the possible event of bankruptcy of some of the contracting estates the doctor may find himself bound by his agreement with the remaining ones, whose share of his salary would be inadequate to meet his living expenses. This is all very true; indeed, some years ago [1] we published a letter from a correspondent detailing his experience in the Western world, and showing that in all similar contracts for service the possibility of the pecuniary failure of the employer should be contemplated in the agreement. Foreign appointments such as those described can, and often do, offer a delightful mode of existence. They can be just the reverse; and the difficulty is to obtain beforehand data to enable one to come to a trustworthy conclusion. If among friends can be found one who knows the country and the conditions of existence, then the task is very greatly simplified. Failing such help great precaution should be exercised.

DARWINISM, MEDICAL PROGRESS, AND EUGENICS.[2]

IN inviting Professor Karl Pearson to deliver the Cavendish Lecture for this year the council of the West London Medico-Chirurgical Society made a departure from precedent which, as the distinguished lecturer pointed out, has the significance of a formal and authoritative recognition of the need of coördinating the aims of medical science with those views and tendencies connoted by the term "eugenics." As recent controversy has shown, there has been of late some disposition to represent medicine and eugenics as mutually antagonistic, and more particularly to impute to medical progress a large part of responsibility as an agent in debasing racial quality by interfering with the natural elimination of the unfit. And it may at once be admitted that there is sufficient plausibility in this view to render it desirable that the arguments in its support should be fully examined; for, if this alleged antinomy is found to exist, means should be sought for its removal. This is the task which Professor Pearson has essayed, and, though his opinions on some points of detail may be open to question, the general trend of his argument and the main conclusions to which it leads him will probably command the assent alike of the physician and the eugenist. According to the view maintained in his address, medical progress, which has brought about so notable a fall in infantile mortality, and which has in other ways helped the weaklings to survive and to propagate their kind, must be frankly recognised as a force tending to counteract natural selection. Unless, indeed, we arbitrarily suppose that Darwinism has no application in the case of man, this view would appear to be inevitable on *a priori* grounds, and Professor Pearson tells us that its validity can also be conclusively shown by statistical evidence, which proves that the infantile death-rate is to a large extent selective, so that where this rate rules high it leaves a physically stronger population in the later years of life. If, then, we accept, even in a modified form, this conclusion that Darwinism and medical progress are opposed, how is the problem of their opposition to be resolved? The method which Professor Pearson, in common with most eugenists, would propose is to substitute social for natural selection, and to enforce this social selection by restricting the right of parenthood—refusing this right absolutely to the insane, the feeble-minded, the epileptic, the diseased, and the deformed. This suggestion is, of course, by no means new; it has been put forward again and again, and sometimes, perhaps, in forms indicating more zeal than wisdom on the part of its advocates. If, despite all that can be urged in its favour, medical men, though sympathising with the principle, are slow in associating themselves with the thorough-going policy of the more enthusiastic eugenists, the reason is probably to be sought in a fact which Professor Pearson seems to some extent to overlook, and that is the essentially individualist training and attitude of the physician. This is why even those medical men who are most constantly engaged in the study of humanity in the mass, and who are, therefore, forced to consider social problems from a point of view akin to that of the pure statistician, cannot forget, as the statistician is rather prone to forget, that the conclusions reached by statistical methods, however valid they may be, are necessarily "group truths," and as such can never furnish adequate guidance for individual cases. We touch here, of course, on one of the chief weaknesses of the statistical method in biology, and even those who may accept the results of this method as of value in their general indications, will admit the difficulty of applying them in concrete instances. When, for example, statistics tell us, as Professor Pearson points out, that the average number of insane offspring of an insane parentage is about 25 per cent., the fact, important as it is, only helps us to a very limited extent in deciding whether the particular person with an insane history whom we have to advise is, or is not, likely to beget children who will become mad. And for the same reason this statistical result does not afford quite satisfactory grounds for advocating an absolute prohibition of parenthood to all the members of a stock in which there have been cases of insanity. Perhaps, as Dr. Charles Davenport suggests in a recent address dealing with this same question,[3] the researches of the biologists of the Mendelian school will in time provide data of a more precise and definite kind, and better suited to furnish guidance in the concrete problems of medical practice. Be that as it may, there can be no doubt as to the growing urgency of the question to which Professor Pearson refers, and he has certainly done good service in insisting on the imperative necessity of the coöperation of medicine and eugenics in the conscious and organised race-betterment of the future.

INVESTIGATIONS INTO MALARIAL PARASITES.

THE following report has been sent to us from the Hygiene and Preventive Medicine Department of the Tulane University, Louisiana, and describes the first expedition from the Tulane University School of Tropical Medicine to the tropics for the study of malaria. This expedition was made possible through the kindness of an unknown friend of the school who, through Dr. Isadore Dyer, Dean of the Medical Department of Tulane University, contributed a fund to finance the project. The United Fruit Company, who have already contributed $25,000 towards the expenses of the School of Tropical Medicine, gave steamship accommodation and equipment to the school, and arranged for the

[1] THE LANCET, July 24th, 1897, p. 234.

[2] Darwinism, Medical Progress, and Eugenics. The Cavendish Lecture, 1912. An Address to the Medical Profession (Eugenics Laboratory Lecture Series IX.) by Karl Pearson, F.R.S., Galton Professor of Eugenics, University of London. London: Dulau and Co., Limited. 1912. Pp. 29 + 7 plates. Price 1s. net.

[3] Eugenics and the Physician, New York Medical Journal, June 8th, 1912.

transportation gratis of the expedition and apparatus. Colonel W. C. Gorgas, chief sanitary officer of the Panama Canal zone, with various members of his staff, placed all the material in his hospitals at the disposal of the expedition, and extended every possible courtesy. The *personnel* of the expedition consisted of two members of the school, Dr. Charles Cassedy Bass, assistant professor of tropical medicine and hygiene, and Dr. Foster Mathew Johns, assistant in the laboratories of tropical medicine and hygiene. The object of the investigation was the cultivation of the malarial parasites *in vitro* which had already been accomplished by Professor Bass, but many details of which remained to be elucidated and confirmed. "In this the party obtained complete success," says the report. "It was found that the malarial plasmodia can be grown in human serum, in Locke's fluid (from which calcium chloride is omitted), and in human ascitic fluid. In the majority of cases dextrose must be added to the medium to secure satisfactory growth. The most favourable temperature for the cultivation of plasmodia is about 40° C. Positive cultures were obtained from 29 cases of æstivo-autumnal malaria, 6 cases of tertian, and 1 case of quartan. Cultures were carried on for four generations from the parent culture before the expedition left Central America, and can probably be maintained indefinitely." In addition to these researches the school has also carried out experimental work on pellagra, leprosy, beri-beri, blackwater fever, filariasis, and other tropical diseases. The school is under the direction of Dr. Creighton Wellman, formerly of West Africa and the London School of Tropical Medicine, who must be congratulated on the work already undertaken by his new organisation, as the school is only now entering the second year of its existence. The observations upon malarial parasites are interesting inasmuch as for many years all attempts to cultivate the plasmodia on artificial media outside the human body had proved unsuccessful. The work of Dr. Bass and Dr. Johns should in our opinion give an important impetus to the experimental study of some at least of the still unsolved problems connected with malarial fevers.

THE ANGLO-SAXON AS A TROPICAL COLONIST.

IN our correspondence columns Dr. Richard Arthur, of Sydney, asks for help in solving a problem which bears very directly on the future expansion of the Anglo-Saxon stock. It is now apparent that we shall conquer the endemic diseases of the tropics and lay the latter freely open to European races, but the important question has yet to be answered. Can the white races, especially the Anglo-Saxons, successfully colonise the tropics? It appears that there is every likelihood of the experiment being tried in the tropical part of Queensland—an experiment which Dr. Arthur anticipates may end in a disastrous failure. The problem is a very old as well as a very important one. Dr. James Prichard,[1] the first great English anthropologist, laid it down as an axiom that white races were constitutionally unfit to become permanent settlers in tropical countries, and that is the opinion still held by modern anthropologists. By far the best statement of our present attitude towards this question appeared in the *Eugenics Review* for April, 1911, from the pen of Dr. J. H. F. Kohlbrugge, now a resident of Utrecht, but for many years a physician in Java. He is known throughout Europe on account of the excellent observations he made on the health of Europeans living in the tropical climate of Java and the valuable anthropological and anatomical investigation which he carried out while a resident there. He confirmed the opinion held by the late Professor Stokvis, that "if a white man be a wise man" he can acclimatise himself to tropical conditions perfectly well. There is nothing in the constitution of the white man which prevents him from maintaining good health in the tropics; there is, therefore, no objection which can be raised to the Queensland experiment from a health point of view. "But," adds Dr. Kohlbrugge, "we have been taught another lesson by practical experience; no white race has been able to survive in the tropics unless race mixture takes place." Race mixture and race problems are results which the Australian Government particularly wish to avoid. "Fair Europeans," adds Dr. Kohlbrugge, "have not been able to hold their own in the tropics, although fertility does not decrease, at least, not in the first generation, and their first children show good promise. Degeneration only sets in later." It will be thus seen that Dr. Kohlbrugge takes a pessimistic view of the future of the Anglo-Saxon as a tropical colonist. He admits, however, that there is an urgent need for the further collection of facts bearing on this problem, such as Dr. Arthur is now in need of, and adds, "Queensland seems a most interesting field for experiment because no race mixture is to be feared, and also because the colonists are obliged to do their own work. The results will only be conclusive after another hundred years or so." It will be noted that Dr. Kohlbrugge does not expect the experiment in Queensland to end in disaster for the first or even for the second generation of settlers; it is only the ultimate success of the experiment which he regards as open to doubt.

[1] James Cowles Prichard: Researches into the Physical History of Man, 1813.

THE TREATMENT OF SMALL-POX BY APPLICATION OF TINCTURE OF IODINE.

IN the *Indian Medical Gazette* for September Dr. A. G. Newell, health officer of Lahore, has recorded excellent results from the application of tincture of iodine to the lesions of small-pox. As iodine has proved so useful as an antiseptic it occurred to him to use it to disinfect the skin in small-pox, and so diminish the aerial dissemination of infectious epithelial débris. It seemed that the earlier this was done the better. Accordingly he painted the more exposed parts, such as the forehead, chin, neck, and backs of the hands. He found that this treatment accomplished much more than the object in view. When used early in confluent cases it materially affected the development of the pocks and prevented pitting, which is so horrible a result in these cases. The earlier it was applied the better. The application was made two or three times a day for a few days, and then the drug was discarded. The stained scabs and epithelium came away. The method was successful both in Indians and Europeans. Other advantages derived from it were as follows: 1. Modification of the disease. 2. Diminution of the pain and fever. 3. Disinfection of the parts to which it was applied and consequent lessening of the chances of infection from epithelial débris. 4. Lessening of the spread of the disease among natives who refuse to go to hospital. If the exposed parts are disinfected arrangements can be made to disinfect the clothing covering other parts. 5. Diminution of the mortality in confluent cases, for when the pocks are abated the toxæmia is diminished. Dr. Newell proposes to try how far the mortality can be further diminished by a more extensive application of iodine. He intends to apply it alternately to different parts of the body so as to treat the whole eruption. We may point out that similar results from the use of carbolic have been recorded in our columns. Dr. J. T. Neech applied the pure acid with a small camel-hair brush to the spots of a certain

area each day, first to the face and head.[1] He found that the treatment arrested the disease in the papular vesicular, or pustular stage and prevented pitting. In an outbreak of small-pox in Bury this treatment was carried out by Dr. A. E. Brindley and Dr. F. W. Bonis.[2] They confirmed Dr. Neech's claims and found that the vesicles rapidly shrivelled up and scabbed. They attached importance to the early removal of the scabs by an oil poultice or otherwise, as this tends to prevent subsequent suppuration. Carboluria was never observed. A striking result was the mildness of the symptoms coinciding with maturation of the pustules. In several cases the temperature was practically normal throughout. The treatment lessened the pitting but was not a certain preventive. To obtain the best results it was necessary to apply the acid carefully to the whole eruptions a part at a time. On the first day the face and neck were treated, on the following day the hands and arms, then the lower limbs, and finally the trunk.

THE OUTLOOK IN RADIOLOGY AND ELECTRO-THERAPEUTICS.

IN our issue of August 24th, p. 542, we referred to the advances that had been made in recent years regarding the medical applications of radiology, and now our attention has been drawn to a presidential address given by Dr. Frank Fowler before the Bournemouth Medical Society, entitled "A Review of Electrotherapy and Radiology." In reading this address we have been impressed with the long list of physical agents that have been brought into the field of practical therapeutics, and still more with the numerous diseases that are now treated by these agents with a degree of success that is highly creditable. Nor is the field of usefulness confined to treatment only—the value of electro-diagnosis in certain disorders of the nervous system would be difficult to over-estimate, since it affords evidence of the most positive kind. Of an equal importance, but of more general application, is the evidence afforded by means of the X rays; though the correct interpretation of the appearances on the screen or plate is at times very difficult, this gives no real trouble to the skilled worker. It is rather startling to consider for a moment where we would be if suddenly deprived of the assistance of X rays, and yet we may remember that it is just 17 years since the existence of such radiations was demonstrated. Seldom has the result of physical experiment been so quickly and extensively applied to the benefit of humanity. The value of the X rays in therapeutics, though of a less positive character than in diagnosis, is a subject upon which many volumes have been written, and it is safe to say there will be many more to follow. Numerous skin diseases which resisted ordinary remedies give way to X ray treatment. Familiar instances are those of acne vulgaris, and psoriasis. Numerous cases of rodent ulcer have been treated with complete success; the time required for the cure of ringworm is a mere fraction of what it was before the X ray method was perfected, and this list might be very greatly extended. One point in Dr. Fowler's address, which he treated at rather greater length than the others, presents some encouraging features, and that is the use of the X rays in the treatment of cancer. While it is not claimed that operable cases should be given X ray treatment, nor that it is possible to cure cases that have been declared inoperable, there seems to be enough evidence now available to encourage an intelligent and genuine coöperation between the surgeon and the radiologist. Surgery can never be sure of removing the last trace of a cancerous growth, while the proper use of the X rays after operation, and perhaps before as well, increases the patient's chance of escaping recurrence. Incidentally, pain when present is relieved in nearly all cases, small superficial nodules disappear, ulceration is healed over, and the retrogression of enlarged glands is familiar to every radiologist. Unfortunately neither this method nor radium gives us any control over metastasis. It is those rays that are absorbed by the superficial layers of the tissues that are the most efficient in a therapeutic sense—their value decreasing very rapidly at a short distance from the surface. This, however, only emphasises the necessity for early applications, and the futility, or worse, of delaying the X ray treatment until definite signs of recurrence have developed. Much remains to be done along these lines; it is possible that good results may come from the use of secondary radiations. Every substance subjected to the influence of the X rays—especially metals of high specific gravity—gives off a secondary radiation that is constant for any given substance, but differs with each proportionately to the specific gravity. The trouble so far is that the output of these secondary radiations is so small, but it is not too much to hope that this drawback may be removed. At present the rays given off from the X ray tube are of a complex character, and though we can arrange for a predominance of "hard" or "soft" rays up to a certain point, the fact remains that the beam is essentially polychromatic. We want a series of monochromatic beams any of which may be used at will. To put the matter in another way, we are now, as it were, working with a crude drug containing many alkaloids, which differ in their properties and effects; we are looking for a method of separating out these different alkaloids in sufficient quantities for practical use. This subject seems to us to be worthy of the fullest investigation, and if the problem is satisfactorily solved it seems likely that the X ray treatment of cancer will become increasingly important, and certainly more scientific.

[1] THE LANCET, Feb. 21st, 1903, p. 518.
[2] THE LANCET, Oct. 24th, 1903, p. 1153.

A POST-GRADUATE MEDICAL COURSE IN CHILD HYGIENE.

THE future of the race depends upon the fitness of its children. The fitness of its children depends in the last resort upon the capacity of the general practitioner to advise soundly and sanely those who have the care and bringing up of children. Therefore it may truly be said that the future of our race depends upon the general medical practitioner. It is consequently one of his most pressing obligations to keep himself abreast of the increase of knowledge in this particular, an obligation of greater economic importance even than that of rendering aid to the sick. To aid him in this task there was formed last July by the Federation of the National Conferences on Infantile Mortality, the National League for Physical Education and Improvement, and the Women's National Health Association of Ireland, a National Association for the Prevention of Infant Mortality and for the Welfare of Infancy. This association has lost no time in getting to work, for already it announces a post-graduate course on the feeding and care of infants, with special attention to the milk problem. The advisory committee of the course consists of Sir Thomas Barlow, Sir Lauder Brunton, Dr. E. Cautley, Dr. A. E. Garrod, Sir James Goodhart, Dr. W. Hale White, Dr. E. W. Hope, Professor H. R. Kenwood, Dr. James Kerr, Professor C. J. Martin, Sir Shirley Murphy, Dr. A. Newsholme, Sir William Osler, Professor G. F. Still, and Sir John Tweedy. The course, the fee for which to medical men is the modest sum of one guinea only, will take place in London from Jan. 6th to 16th inclusive, the various classes being held at the St. Marylebone General Dispensary, the St. Pancras School for Mothers, The Lister

Institute, Guy's Hospital, and St. Bartholomew's Hospital, with special visits to Moundsmere Manor Farm, Basingstoke (at a slight additional cost), and to an up-to-date town dairy. The subjects dealt with will include the general hygiene and nutrition of the infant and young child in health and the common dietetic disorders, the examination of stools, natural, mixed, and artificial feeding in all its aspects, weaning and feeding and care during early years of life, the composition and properties of milk, milk-supply, contamination, and distribution, and the commoner forms of dried and preserved milk. Among the lecturers will be Professor Still, of King's College and the Great Ormond-street Hospitals; Dr. Eric L. Pritchard, of the Queen's Hospital for Children; Professor Harden and Professor C. J. Martin; Dr. H. C. Cameron, of Guy's Hospital; Professor H. R. Kenwood, Dr. J. A. Arkwright, Mr. Major Greenwood, jun., and Dr. J. C. G. Ledingham, of the Lister Institute; Dr. Janet E. Lane-Claypon; Dr. D. Forsyth, of Charing Cross Hospital; Mr. Mackenzie Wallis, of St. Bartholomew's Hospital; Dr. E. Cautley; Miss Bibby, sanitary inspector of St. Pancras; and Miss Marion Fitzgerald, sanitary inspector of Woolwich. The course is intended for those members of the profession who are desirous of bringing themselves abreast with modern methods, though health visitors, sanitary inspectors, and others interested can be admitted to the course (except the lectures given in hospitals) for a fee of 5*s*. The honorary secretary is Dr. Janet E. Lane-Claypon, 18, Craven-terrace, Lancaster Gate, W., from whom further information can be obtained, and who will receive applications for attendance, with fees. It is to be hoped that as many practitioners as possible will avail themselves of the opportunities thus offered.

PREVENTIVE MEASURES AGAINST TUBERCULOSIS IN NEW YORK.

THROUGH the kindness of Dr. J. S. Billings, jun., chief of the Division of Communicable Diseases of the Department of Health of the City of New York, we have received a copy of the current handbook which gives information concerning the routine procedure of that division. As might be expected, in view of the way in which New York sanitary administration is identified with the campaign against tuberculosis, the greater part of the volume is concerned with the practice of the Health Department in regard to cases of that disease. From a study of the handbook it is possible to realise the enormous mass of preventive and curative work which is undertaken in this respect. There are lists of forms by the score, from the "grocery sheet" of the day camps, to the "tuberculosis folder" in Armenian; tables showing the hour and minute at which the official collectors call daily at the hundreds of appointed places at which sputa and other material can be left for examination; maps of tuberculosis clinic districts, particulars of borough and branch offices, hospitals and camps, notification proceedings, and similar matters. Sections quoted from the official code show the duties of the tuberculosis inspector, district nurses, and other staff, down to the 15 articles which the nurse is expected to take with her on her visits and the manner in which the answers to some 70 questions are to be obtained for each tuberculous patient. The whole system to which the handbook relates, in fact, is a piece of practical organisation for which the health department deserves the greatest credit. The general system which is followed already has a parallel in this country in the work of some of our municipalities and dispensaries in directions which are now about to be further developed in connexion with the administration of sanatorium benefit by local authorities. In England, however, there is at present no counterpart to the more drastic items of the New York code. Forty years ago, when the author of "Erewhon" wished to satirise our conception and treatment of crime, he could not have presented to the public anything more inherently improbable than the trial of a prisoner for the offence of suffering from pulmonary consumption. In these days the force of the satire is already a little blunted, and when we read directions for the forcible removal of tuberculous patients from their homes we wonder whether, 40 years hence, Samuel Butler's ironies may not have become unintelligible.

RESEARCHES ON BLOOD PARASITES AT THE ZOOLOGICAL GARDENS.

THE number of human and animal diseases shown to be due to the presence of blood parasites is constantly on the increase, and very many apparently healthy mammals, birds, and reptiles appear to harbour numerous parasites in their blood. This is a factor to be taken into account in all investigations of such parasitic infections, and it would not be difficult to give examples showing how error may be introduced into experiments by mistaking normal parasites for those thought to be the result of artificial inoculations. On the other hand, a study of these parasites of the lower animals has proved of great value in filling gaps in our knowledge of the life history of allied organisms occurring in human diseases. Since also many of the lower animals appear to be the intermediate hosts of blood parasites, or, as in the case of sleeping sickness, possibly the reservoirs of infection which serve to keep alive the disease when man is withdrawn, all comparative studies of blood parasites become of interest and may possibly be of great direct importance to our knowledge and control of human infections. It is from this point of view that the patient routine examination of the blood of all animals dying at the London Zoological Gardens during the four years 1908–1911, which has been carried out by Mr. H. G. Plimmer,[1] is of great interest and value, as are also, though perhaps less directly, the investigations of Dr. B. Blacklock[2] on strains of trypanosomes and double infection by these organisms in the horse. Mr. Plimmer has examined the blood of no less than 6430 animals and found parasites present in about 7 per cent. Animals belonging to 256 species were found to be infected. The parasites found were embryo filariæ, spirochætæ, and trypanosomes inhabiting the serum and hæmogregarines and plasmodial parasites affecting the corpuscles. There is no attempt in the paper to connect the presence of these parasites with any disease from which the animals suffered.

THE POINT OF ORIGIN IN TUBERCULOSIS OF BONE.

A VALUABLE paper dealing with the actual point of origin of tuberculosis in the various bones is contributed by Mr. John Fraser to the November issue of the *Edinburgh Medical Journal*. Put briefly, his conclusions are that in the neighbourhood of joints the disease starts by an embolic process at a point of free anastomosis among the nutrient vessels of the bone. This anastomosis is most fully developed at a point close to the reflexion of the synovial membrane, where the circus vasculosus enters the bone; the actual spot thus varies in the case of different bones according to the arrangement of the synovial membrane, involving sometimes the epiphysis, at other times the bone on the diaphysial side of the epiphysial cartilage. In some cases Mr. Fraser

[1] On the Blood Parasites found in Animals in the Zoological Gardens during the four years 1908–1911, by H. G. Plimmer, F.R.S., pathologist to the society. (Proceedings of the Zoological Society of London, 1912.)
[2] The Measurements of a Thousand Examples of a Short Form of Trypanosome from a Double Infection, by B. Blacklock, M.D. (Annals of Tropical Medicine and Parasitology, vol. vi., No. 2, 1912.)

has succeeded in demonstrating by injection with soot that the points liable to tubercular infection are also points at which deposition of pigment takes place. Taking in order the joints commonly affected, we find that in the neighbourhood of the hip-joint the favourite seat of the disease is a point on the under surface of the neck of the femur just on the diaphysial side of the epiphysial cartilage. Here the synovial membrane is reflected from the capsular ligament on to the bone. The lower end of the femur in the region of the knee-joint is affected in the epiphysis, the reflexion of the synovial membrane here not extending above the epiphysial cartilage. In the neighbourhood of the ankle injection gives rise to pigmentary deposit chiefly in the interior of the neck of the astragalus, the vessels entering from the reflexion of the synovial membrane off the anterior ligament, and this is also the seat of election of tuberculosis involving the ankle-joint. Disease of the shoulder-joint is primarily a synovitis, any extension to the bone being secondary and most commonly affecting the head of the humerus. In the elbow-joint the reflexion of the synovial membrane extends upwards on the lower end of the humerus above the line of the epiphysial cartilage, the principal vessels entering from behind; and here accordingly the diaphysis is primarily diseased. The case is different with those portions of bone which do not lie in close connexion with a joint. Here the primary trouble is a tubercular endarteritis affecting the nutrient artery; owing to resulting defect in blood-supply the interior of the bone degenerates, the red marrow disappears and is replaced by fibro-myxomatous material, the lamellæ becoming rarefied and absorbed. At such a point of predisposition tubercle bacilli are subsequently deposited and cause a specific osteo-myelitis. The bones most often affected in this way are those on which strain is constantly thrown—the bodies of the dorsal vertebræ and the bones of the hand and foot. The paper is illustrated with many drawings and photographs, and is well worthy of study, the conclusions being somewhat opposed to views ordinarily accepted, but being based on careful study of over 150 specimens of actual tuberculosis of bone.

HUNTERIAN SOCIETY.—This society, founded in 1819, and therefore one of the oldest medical societies in London, holds fortnightly meetings during the winter months at the London Institution, Finsbury-circus, close to Moorgate-street and Liverpool-street stations. In the papers presented and cases and specimens shown the practical and clinical features are particularly emphasised. Reference was made recently, in a letter from the honorary secretaries, to the society's annual silver medal for the best unpublished and original essay by a general practitioner—open to all registered general practitioners resident within Great Britain, whether Fellows of the society or not—on subjects chosen by the candidate in the fields of medicine, surgery, or midwifery, with the view to encourage individual effort among general practitioners in advancing the science and art of medicine. While the essay must be based on the candidate's own observations, it may contain excerpts from the literature of the subject, provided due reference be made, and also may include observations made by workers engaged in special methods not available in ordinary practice, provided the source of information be duly acknowledged. Clinical meetings are held during each session at various hospitals thus affording Fellows the opportunity of seeing cases of exceptional interest. The last meeting was held at the Westminster Hospital and is elsewhere reported. Another privilege is that of obtaining books from Lewis's Medical Library on application by postcard to the secretary, the cost of postage both ways being borne by the Fellow. The subscription of half a guinea, with half a guinea as entrance fee, is moderate enough for the privileges enumerated, to which must be added the pleasures of social intercourse.

BELEAGUERED CONSTANTINOPLE:

A REPORT BY MR. OSBORN.

Mr. Samuel Osborn, whose services as a Red Cross Surgeon are so well known, arrived at Constantinople on Oct. 21st, being the first English surgeon to reach the Turkish capital. The British Red Cross contingent arrived on Nov. 5th, a little over a fortnight later, and Mr. Osborn was thus able to render them on arrival signal service, having by then got a thorough grip of the situation, being greatly assisted thereto by the help of Sir Richard Crawfurd, of the Turkish Customs House, and Mr. Harold Woods, the son of Sir H. Woods Pasha. Mr. Osborn called at the Office of THE LANCET on his return this week from the war, and detailed his experiences of the last month.

Mr. Osborn was first attached to the Red Crescent Hospital on the Sea of Marmora, on the south side of Stamboul, of which Dr. Nafiz was chief surgeon. Everything was here as it should be, but the place was too small for the number of wounded then coming in, and seven more pavilions were being erected as fast as possible in the surrounding grounds. Dr. Demetrius Chilmiditi was in charge of the Roentgen rays department there, many bullets being thereby located. After helping the British Red Cross on their arrival to fill their beds, Mr. Osborn helped Dr. Clemow, the physician to the British Embassy, to organise another English hospital at Shishli, which was opened on Nov. 11th, as already detailed in THE LANCET, and which on Mr. Osborn's departure was handed over to Dr. Thornton, of St. Thomas's Hospital, one of the surgeons accompanying the Red Cross detachment.

Arrival of Wounded: Nature of Injuries.

Every day large numbers of wounded were coming in, and Mr. Osborn attended at the railway station to superintend their detraining, food in the shape of bread and thick hot soup being supplied them through the kindness of Sir Richard Crawfurd. Besides the lack of proper means of transport, there was an entire absence of organisation, and the surgeons had literally to seize the wounded to fill the hospital, and in this way Mr. Osborn sent some of the most interesting cases up to the British Red Cross Hospital situated at the Museum.

At Seraglio Point on the morning of Nov. 6th, from 7.30 A.M. to 12.30 midday, Mr. Osborn dressed some 200 to 300 wounded men with his first aid dressings on board the two steamboats lying by the edge of the Bosphorus, to which they were carried on stretchers from the railway station. This celerity was obtained by means of some first aid dressings which he took out with him to the number of some 6000, and which proved of invaluable service. We have had the pleasure of seeing these dressings, and they are certainly most complete and most portable, each going into a packet small enough to place in the waistcoat pocket. They were shown to H.I.M. the Sultan, and were taken by all the military attachés when they proceeded to the front, through the courtesy of Colonel Tyrrell, the British Military Attaché at Constantinople.

Mr. Osborn stated that all the Turkish wounded had had first aid treatment at the front but not since, and as many had come from the battle of Kirk Kilisse they had not had their wounds dressed for 14 or 16 days, so they were terribly offensive and usually sloughing. Two fingers dropped off one man's hand when the bandages were removed, and many were maggotty. One man, with an abdominal wound with the spleen exposed, was fly-blown and the maggots were running in and out. There were many wounds caused by shrapnel, but the bullet wounds were not nearly so serious as those met with in the Boer war, where they were often inflicted by soft-nosed bullets. No wounds of this sort were seen; in fact, the bullets were so clean and quick in their passage that the wounds healed well and rapidly. Mr. Osborn cannot say that he personally saw any wounds that he could positively say were self-inflicted ones, such as he remembered to have seen amongst the Greeks in the previous Turco-Greek war. All the cases he saw were as a rule not of a serious character, as these, he believes, must have been left behind on the battlefield to die, or taken charge of by the Allied Forces. No wounded soldier belonging to the Allied Forces did he meet with. There was no proper means

of transport for bringing the wounded from the field of battle, and that probably accounted for this state of affairs.

The soldiers did not object to taking chloroform, and many a brave soldier walked in to the operating theatre to undergo some serious operation. But amputations were strongly objected to on religious grounds against mutilation, and several died who might otherwise have been saved but for this prejudice. One of the most interesting cases was under the care of Dr. Maclean at the British Seamen's Hospital, and of this it is to be hoped he will later give full particulars. It was of symmetrical gangrene of both hands and both feet. Whether this was due to shock or the taking of ergot of rye in bread it is difficult to say, but it is hoped we shall learn more of this very interesting case later on. There was no sign of the man having received any injury at all. This hospital, under the management of Dr. Maclean, is perfect in every detail, possessing every requirement for present-day surgery.

Outbreak of Cholera.

The first case of cholera which had been daily expected, as so many reservists came from Asia Minor, was met with on Nov. 7th, and this man died in Mr. Osborn's arms before brandy could be obtained to give him. The authorities were very loath to admit it was a case of Asiatic cholera, but the sunken eyes, livid face, open mouth with drawn lips, with the teeth showing, and the rigid contraction of the limbs, pointed to the diagnosis. Next day the authorities had to allow it was the first case and disinfectants were freely used. Men carried carbolic sprinklers, and chloride of lime was strewn about and between the several goods sheds where the wounded and sick were detrained.

The next day (the 8th) the cases of cholera arrived in shoals, and stretcher after stretcher passed to the large goods shed, where dying and dead were put in together. A more terrible and ghastly sight it seemed impossible to witness, but things went on from bad to worse. When going for wounded, those dead from cholera were in the train mixed together, the occupants being too weak to throw the cholera cases out of the windows, as had been done in the journey from the front. The route from the battlefield to the railway station in Constantinople was lined with these poor wretches, some even lying on the foot-board of the railway carriages. But few had been buried, some collected into a heap were burned, others lay by the roadside where they had fallen, to be driven over by carts and wagons in their flight from the front.

It is to be feared that the Turkish authorities troubled too little over cases in which cholera had developed, giving them up at once as hopeless. The first case which occurred at the English Hospital at Shishli was so handed over to the sanitary authorities, and this was found to mean signing his death warrant. So it was decided that for the future this should not be done, and that all cases should be isolated and not given up as hopeless, and the action proved successful by their cure. This was accomplished by giving internally diluted solutions of Condy's fluid, subcutaneous injections of strychnine, with milk and brandy every hour as diet, and subsequently "yuork," the Turks' favourite food, a species of fermented milk. Mr. Osborn is quite of opinion that the British Red Cross Association is doing the right thing in sending out a properly equipped cholera hospital and physicians.

The streets especially round and about the railway station, were from almost the first blocked with refugees who had fled from their homes—men, women, and children living in their covered country carts, bringing their flocks of goats, sheep, cattle (some of which could be seen dead on the pavement), with straw and manure all about, like one gigantic farmyard. "What this will generate later on heaven only knows," said Mr. Osborn. "There have been some cases of small-pox, but as yet nothing to an alarming extent.

Unfounded Rumours. Cursory Sanitary Precautions.

I visited several other hospitals by request of Lady Lowther, as there were many disquieting rumours, happily false, afloat concerning them. The Asile des Pauvres out by the Sweet Waters and the Artillery Barracks Hospital on the Golden Horn, near Haskway, both run by Turkey surgeons, were admirably administered and there was no sign of neglect, although it was said that the 600 wounded in the latter were being looked after by only one surgeon and that the greater number of the patients were dying from gangrene and neglect.

On leaving Constantinople it was sad to see the cursory precautions that were taken by the sanitary authorities at the east end of the Bosphorus on board the Constanza boat. A female and male came on boat; the former asked if one had any dirty linen, and the latter looked at me, breathed rather hard on me, which may be taken was the disinfecting process, and finally each person was presented with a card on which the word 'dezinfectat' was written, and this ended the so-called disinfecting process, and one was allowed to proceed. A word of thanks must not be forgotten to one of your local correspondents, Dr. Sandler, who did everything he could to make things run smoothly."

Suggested Rest Hospital, &c.

Mr. Osborn's suggestion of having a rest hospital close to the railway station and a base hospital farther off was not adopted. The rest hospital could have been easily fed through the kindness of Sir R. Crawfurd, of the Customs House, and the transport of the wounded from the train to this hospital would have been carried out by his Customs porters, the Kurds. This scheme was not carried out. The base hospital allocated to the British by the Turkish Red Crescent Society is the museum. It contains very splendid rooms, but more suitable in the eyes of the medical men to bas reliefs and stone figures, which do not require feeding, lights to read by at night, water to drink, and other sanitary conveniences, than for wounded soldiers. It would have been far better, says medical opinion, to have taken the Girls' School in Stamboul or the Hotel Krocker in Pera. That the British Red Cross detachment have no beds and that their wounded are lying on mattresses placed on the stone floor of the Museum is due to the fact that they did not bring their stores with them, and came out more as a field hospital for the front (the front has now come to them) than as a stationary or base hospital, but everything is being done by Major Wyllie and a capable coadjutor, his wife, and these apparently insurmountable difficulties are being rapidly overcome by indomitable energy.

THE EIGHTH REPORT OF THE ROYAL COMMISSION ON SEWAGE DISPOSAL.

IN the eighth report of the Royal Commission on Sewage Disposal which was issued last week (Cd. 6464) the commissioners deal with the question of the standards to be applied to sewage and sewage effluents discharging into rivers and streams, and the tests which, in their opinion, should be used in determining those standards. In the next and final report the commissioners propose to deal with methods of disposal not involving water carriage and with standards in regard to trade effluents. Since the issue of the last report, in which particular reference was made to the question of local circumstances being taken into account with the view of affecting economies, much of the time of the Commission has been devoted to the object of ascertaining the extent to which it may be practicable to take such circumstances into account and the machinery by which this may be done. Accordingly they have kept under observation, through their officers, a considerable number of rivers and streams of different types with a view of tracing the effects of discharging various sewage liquids of known composition and volume into streams of known quality, volume, and velocity. As a result of these observations the commissioners reiterate their recommendation that the law should be altered so that local authorities should not be required to purify their sewage more highly than is necessary to obviate the risk of actual nuisance arising from its discharge. This recommendation obviously necessitated the collection of new materials which should form a wide basis for estimating the comparative value of different chemical tests in measuring the condition favourable to producing a nuisance possessed by a sewage liquid which yields certain data on chemical analysis. Ultimately attention was given exclusively to three tests: (1) the amount of ammoniacal nitrogen present; (2) the

amount of oxygen absorbed from permanganate in four hours; and (3) the amount of dissolved oxygen taken up in five days. The relative value of these tests as bearing upon the questions of pollution and purification, together with the best methods of applying them, are fully discussed in the report.

The points considered cover the methods of applying a standard, the quality of water as a factor in a graduated scale of standards, dilution as a factor in determining the selection of a standard, a normal standard for effluents, specially stringent standards, the relaxation of normal standards under circumstances which appear to justify it, the conditions under which it may be permissible to discharge partially purified or unpurified sewage into a stream, and the broad question of the administration of standards in general. As an outcome of the investigations, which are based upon many practical experiments and laboratory researches, it is suggested that the law should be altered (the Rivers Pollution Prevention Act, 1876), so that a person discharging sewage matter into a stream shall not be deemed to have committed an offence under the Act if the sewage matter is discharged in a form which satisfies the requirements of the prescribed standard. This standard would be either the general standard or a special standard which will be higher or lower than the general standard as local circumstances require or permit. It is recommended that an effluent, in order to comply with the general standard, should not be permitted as discharged to contain more than 3 parts per 100,000 of suspended matter, and with the suspended matters included the effluent should not take up at 65° F. more than 20 parts per 100,000 of dissolved oxygen in five days. It is proposed that this general standard should be prescribed either by statute or by order of the central authority, and should be subject to modifications by such authority after an interval of not less than ten years. Of course, the dilution afforded by the stream is the chief factor to be considered in fixing any special standard. Thus, if the dilution is low it may be necessary, as the commissioners point out, for the central authority, either on their own initiative or on application by the rivers board, to prescribe a specially stringent standard which should remain in force for a period of not less than ten years. Further, if the dilution prove to be very great, the standard may, with the approval of the central authority, be relaxed or suspended altogether. In the experience of the commissioners if the dilution, while not falling below 150 volumes, does not exceed 300, the dissolved oxygen absorption test may be omitted and the standard for suspended solids fixed at 6 parts per 100,000. In order to comply with this test no treatment beyond chemical precipitation would appear ordinarily to be needed. When the dilution, while not falling below 300 volumes, does not exceed 500, the standard for suspended solids may, in the commissioners' opinion, be further relaxed to 15 parts per 100,000. Then tank treatment without chemicals would, they think, suffice if the tanks were properly worked and regularly cleansed. It is obvious that these relaxed standards should be subject to revision, and it is suggested that this should be done at periods to be fixed by the central authority, these periods to be shorter than those prescribed for the general or for the more stringent standards. Lastly, with a dilution of over 500 volumes the commissioners conclude that all tests might be dispensed with and crude sewage discharged, subject to such conditions as to the provision of screens or detritus tanks as might appear necessary to the central authority.

This document is a valuable one, and presents issues of the utmost importance to the community. It may, however, be well assumed that the recommendations suggested are founded on very careful observations, and that the commissioners are justified in submitting that the relaxation of a standard of purification in regard to the discharge of sewage into streams may in some circumstances be permitted. It seems, however, desirable, in the event of these recommendations being adopted, that the central authority to whom such questions are to be referred shall be a very efficient and vigilant body, for the question of the pollution of our rivers has intimate relations with the maintenance of the public health, and no considerations of economy should be allowed to interfere with hygienic requirements.

THE PROVISION OF STREET AMBULANCES FOR LONDON.

DURING the meeting of the London County Council on Nov. 12th an urgency report was presented by the General Purposes Committee dealing with the question of street ambulance provision in London. The County Council is empowered by the Metropolitan Ambulances Act, 1909, to establish an ambulance service.

Report of General Purposes Committee.

The General Purposes Committee in its report observed that the powers conferred upon the Council by this Act were permissive only. The Council in approving in 1905 an experimental scheme for the establishment of an ambulance service was presumably satisfied at that time that such a service was necessary. It had now to be considered, however, whether such material improvement had taken place in the provision of ambulances in the last six years as to render it unnecessary for a municipal service to be established and maintained, and whether the needs of the county could be met by subsidising existing organisations or by an organisation which might be instituted by private enterprise. The committee had therefore obtained information as to existing ambulances from the metropolitan police, the Port of London Authority, the Metropolitan Asylums Board, the Metropolitan Water Board, the borough councils, boards of guardians, and the principal hospitals.

The most important provision was made by the metropolitan police, which maintained 199 ambulances at police stations and 137 placed in streets. The Port of London Authority was effecting great improvements in its ambulance facilities, and when these were complete the service would consist of 4 motor ambulances, 41 litters and litter under-carriages, 43 stretchers, and 38 awnings. The equipment was designed for the service of the dock premises, and would not prove more than adequate for that purpose. The Metropolitan Asylums Board possessed 8 ambulance stations, which combined had accommodation for 184 men and 60 nurses. There were immediately available 62 horse-drawn ambulances, 17 petrol-driven ambulances, and 11 petrol-driven omnibuses; 11 more motor ambulances were to be acquired. The Board's ambulance service was instituted for the conveyance of infectious cases, but during the last ten years it had been necessary to provide for the conveyance of non-infectious patients to the imbecile asylums and children's institutions. In the last three years no fewer than 5000 non-infectious cases were conveyed in the Board's ambulances. The Metropolitan Water Board had no ambulance facilities; in 25 boroughs no ambulances were under the direction of the borough council. There was small provision in Battersea, Fulham, and Poplar. As to the boards of guardians, the ambulances were principally used for conveying patients between the workhouses and the infirmaries. In regard to the provision at the hospitals, the following had no ambulances: Bolingbroke, Guy's, Kensington and Fulham, King's College, London Homœopathic, Middlesex, St. George's, St. John and St. Elizabeth, and West London. The following had one hand ambulance each: Charing Cross, London Temperance, Metropolitan, Miller General, Poplar, St. Bartholomew's, St. Mary's, St. Thomas's, Royal Free, Westminster, and Great Northern Central (used occasionally for cases of accident occurring near the hospital). The London Hospital and University College Hospital had one horse ambulance and a hand ambulance each. The St. John Ambulance Association appeared to have no general organisation for dealing with ordinary street accidents.

Proposal of Committee to Coördinate Present Ambulance Services.

A conference of the London boards of guardians held in 1907[1] to consider the ambulance question passed the following resolution:—

That this conference is of opinion that an effective ambulance service for London can be established and maintained without expense to the public rates, by coördinating and developing the existing services, and by empowering the Poor-law authorities of the metropolis—viz., the Metropolitan Asylums Board and the boards of guardians—to place the ambulances they possess at the disposal of the public.

[1] THE LANCET Feb. 16th, 1907, p. 449.

Mr. Lyon Thompson, the chairman of this conference, had suggested that the ambulances of boards of guardians might be used for street accidents, private telephones, such as those in chemists' shops, being utilised by consent for the purpose, and that thus an efficient service would be available in a comparatively short time at very small expense. The General Purposes Committee thought there was much in the contention that there already existed in London material which, with efficient coördination and organisation, would furnish an adequate ambulance service. In view of the expression of opinion by the Local Government Board, to the effect that, while approving of the principle of a united ambulance service, it had no power to authorise or sanction such a service, the committee considered that the Council should seek Parliamentary powers next session to enable ambulance authorities to enter into agreements with the Council, and that the Home Secretary should be asked to procure the provision of a larger number of suitable appliances to be maintained by the Metropolitan Police.

Adoption of Committee's Proposal.

In the discussion which followed Mr. H. L. JEPHSON moved an amendment which had for its principal object the control of all existing ambulance services by the County Council, and in the course of his speech said that the return of the killed and wounded by accidents in the streets of London showed that the numbers had risen from 175 people killed and 9505 injured in 1902, to 410 people killed and 19,157 injured in 1911. Apart from the hand ambulances and wheeled litters of the metropolitan police there was, he said, practically no provision for those stricken down in the streets. The late Dr. Danford Thomas and Sir William Collins had frequently called attention to the matter.—Mr. W. C. JOHNSON seconded.—Mr. E. GRAY, vice-chairman of the committee, pointed out that it was necessary to have properly trained men for the ambulances.—Mr. EDWARD SMITH made the suggestion that the services of the fire brigade should be utilised in connexion with an ambulance service.—On a division the amendment was lost and the recommendation of the committee that powers be obtained to coördinate existing authorities for street ambulance purposes approved.

MEDICINE AND THE LAW.

A Medical Libel Action.

IN the King's Bench Division of the Royal Courts of Justice, before the Lord Chief Justice and a Special Jury, on Nov. 22nd, an action for libel was brought by Dr. Patrick Joseph O'Sullivan against the British Medical Association. The alleged libel appeared in the journal of the Association at a time when the plaintiff was a candidate for the post of medical officer to the Whitmore district of the parish of Shoreditch. The article which contained it pointed out that three candidates had applied for the post of medical officer, two of whom had withdrawn, having found on investigation that the remuneration worked out below that generally paid in London, and after referring to Dr. Sullivan's professional experiences and his relations with his partner, concluded by asking whether the army, the sea, and the presumable land of his birth should be the subjects of condolence or congratulation on his absence from home. The plaintiff, who appeared in person, contended that the words of the article were intended to mean that he was a person of slight experience and doubtful qualification, and that he was disloyal to the profession and a disgrace to the persons with whom he had associated and to his native land. He first applied for the post in September, 1911, but was not then elected. He was afterwards appointed. The jury decided that the article was only fair comment, and judgment was entered for the defendants. Messrs. Hempsons were the solicitors for the British Medical Association.

A Successful Claim for Medical Attendance.

Before the Lord Chief Justice and a Special Jury on Nov. 19th, in the King's Bench Division, Dr. Benjamin Duke, of Clapham, claimed from the executors of the late Edward Henry Brown, of Roehampton, £600 14*s.* for medical attendance. The jury returned a verdict for the plaintiff for the full amount claimed. It was alleged for the defence that the charges were exorbitant and excessive. The plaintiff in his evidence stated that he had known Mr. Brown for many years. In 1887 Mr. Brown moved from Clapham to Roehampton, a distance of five miles from Dr. Duke's house. At Clapham he charged 7*s.* 6*d.* a visit and at Roehampton one guinea. The fees were punctually paid up to 1909. Dr. Duke did not send his 1910 account in during January of the following year because of the serious state of Mr. Brown's health. Sir James F. Goodhart, who had attended Mr. Brown, said that in his opinion daily attendances were necessary. The Lord Chief Justice, in summing up, said the charge that the plaintiff had attended unnecessarily in order to make money was a serious one to bring against a medical man, and ought never to have been made without evidence. It was a credit to defendants' counsel that no mention had been made of it by him.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

ANNUAL MEETING OF FELLOWS AND MEMBERS.

THE annual meeting of the Fellows and Members of the College was held on Nov. 21st at the College in Lincoln's Inn Fields, Sir RICKMAN J. GODLEE, the President, being in the chair.

The PRESIDENT, in presenting the annual report, drew attention to several points in it. First, he spoke of the Insurance Act and of the action taken by the Council of the College, especially in conjunction with other bodies connected with medical education. In the next place he referred to certain changes in the regulations for the Diploma in Public Health, and said that he was glad to be able to announce that there had been a steady increase in the number of candidates at the examinations for this diploma, and that at the last examination the numbers had been greater that on any previous occasion. He also referred to the report on the Central Midwives Board by Mr. C. H. Golding-Bird, in which the need was emphasized for adequate arrangements for the payment of the fee of a doctor who may be called in by a midwife in a case of difficulty. The gift of a marble flooring to the hall by the widow of a Member of the College was mentioned. He referred also to the large amount of work which had been done in the museum, and mentioned that a great saving in rent, rates, and taxes had been made by the sale of the examination hall on the Embankment and the building of the new hall in Queen's-square. The President further said that by the recent and much-lamented death of Mr. Clinton Dent the post of vice-president had become vacant, and that Mr. Edmund Owen had been elected.

The PRESIDENT then said that he was ready to hear any questions on the subjects comprised in the report, and, so far as he could, to answer them.

Dr. SIDNEY C. LAWRENCE asked how many women had passed the examinations for the diplomas of Member and Fellow, and he was told that at present there were six Members and one Fellow who were women. In reply to a further question as to the order in which subjects were placed on the agenda paper, he was informed that they were always placed in the order in which they were received, but that on the present occasion Dr. Dickinson, whose resolution had been received before that which was to be moved by Sir Victor Horsley, had requested that the resolution of Sir Victor Horsley should have precedence, and this change had therefore been made.

Dr. W. G. DICKINSON wished to know whether the members of the Council received any fees for their attendance at the annual meeting, and when he was told that no fee was paid he remarked that this fact might possibly account for the small number of members of the Council present.

National Insurance Act.

As no more questions were asked the PRESIDENT called upon Mr. H. NELSON HARDY to move the resolution standing in his name, which was—

That this meeting of Fellows and Members approves and endorses the action of the Council taken during the past year in reference to the Insurance Act, and agreeing with the Council's statement in its letter to the Insurance Commissioners dated Feb. 1st, that the administrations of medical benefits cannot be carried out under the Act, as it at present stands, with due regard to the interests of the public and the welfare of

the medical profession, trusts that in the coming year nothing will deter the Council from discharging its duty to its Fellows and Members as firmly and as faithfully as it has done in the year that is past.

Mr. Hardy recounted the action of the Council in declining to join the proposed committee to carry out the Act, but consenting to assist in drafting an amending Act, and referred to the fact that the Council had been scolded by Mr. Lloyd George, who had told the Council that it was unfit for its duties and that the lowest strike committee in the country would have acted better. It was clear that no satisfactory arrangement could be made without an amending Act. Even the British Medical Association, after a great attempt to secure reasonable terms, had given up in despair. Mr. Lloyd George had endeavoured for a long time to compel the medical profession to accept terms, which now he confessed were insufficient for proper remuneration, yet he threatened that if they did not accept his present offer he would set up a whole-time service. Although he had improved his offer to a slight extent he had added new duties. Mr. Lloyd George could not be trusted.

Mr. E. B. TURNER seconded the resolution, but he pointed out that he could hardly agree with the proposer that the British Medical Association had given up the struggle in despair, for the Association was still fighting, and would continue to fight. He had been present on the previous day when the meeting of Representatives had sat till past 12 o'clock at night, and he knew that the meeting had been very enthusiastic. It was not understood by the public that the money question was the least important of the matters for which they were fighting.

Sir VICTOR HORSLEY said that the question of the amount of payment had always been the central subject.

After Dr. DAY and Mr. COLLINGWOOD had spoken, Dr. ATKINSON suggested the omission of the later words of the resolution, and in this he was supported by Dr. DENNIS VINRACE.

Dr. DICKINSON then moved as an amendment that all the words be omitted after the first occurrence of the word Act, and that the words "so far as it has gone" should be added, so that the resolution would read: "That this meeting of Fellows and Members approves and endorses the action of the Council taken during the past year in reference to the National Insurance Act so far as it has gone." This amendment was seconded by Dr. LAWRENCE.

Dr. GEORGE JONES urged that it was at present impossible to guess the effect of the Act, and suggested that time should be allowed for seeing how it worked.

When the resolution was put to the meeting it was carried, but many of those present did not vote on either side.

Representation of Members on Council.

Sir VICTOR HORSLEY then introduced the following resolution—

That this twenty-eighth annual meeting of Fellows and Members again affirms the desirability of admitting Members to direct representation on the Council, which as now constituted only represents those Members who also hold the Fellowship; and that it does so in order that the constitution of the Royal College of Surgeons of England shall be in keeping with modern ideas of true representation.

He said that the Members of the College had been deprived of their rights; the only right left them appeared to be that they had the privilege of providing a very large proportion of the income of the College. The Council by its action had declared that it did not consider the Members to be fit persons to be represented on the Council, and yet no reason had been given for such an opinion. At the annual meeting in 1910 Sir Henry Morris had declared that the Council's reasons for refusing the right of representation to the Members had been set out in a statement by the Council some years before, but Sir Victor Horsley had found that the only statement made by the Council was contained in a memorandum sent by the Council to the Privy Council, after the Members had presented a petition to the Privy Council in 1907. This statement by the Council really contained no arguments, but merely said that the Members were unfit for representation. The present constitution of the College was neither one thing nor the other; it was neither a mediæval guild nor a modern institution, for even in 1435 the rules of the Guild of Surgeons stated that all the members of the Guild should meet yearly and choose the officers of the year.

Dr. J. OLDFIELD seconded the resolution, and complained that in spite of the repeated demands from the Members the Council always returned the same answers.

Sir ALFRED PEARCE GOULD said that as a member of Council he felt that he must express the reasons of the action of the Council. The duties of the Council were not legislative or political; the duties of the Council were three in number. In the first place they had to take care of the incomparable Hunterian Museum; secondly, to take care of the valuable library which the College possessed; and thirdly, to superintend and to conduct the examinations in surgery. Could it be maintained that the addition of Members to the Council of the College would in any way assist in the carrying out of these duties? Moreover, it must be remembered that there were over 17,000 Members, and the carrying out of an election with so many constituents would be a very expensive matter, costing several hundred pounds. He did not consider that it would be either wise or practicable to grant to the Members representation on the Council.

Dr. FITZGERALD believed that the Members were as fully fitted for looking after the museum as the Fellows.

Mr. COLLINGWOOD urged that the request was reasonable, and he was sure that the Members had no wish to interfere with the administration of the College.

Dr. JOSEPH SMITH expressed his agreement with the speeches of the mover and seconder of the resolution.

Dr. VINRACE claimed that it was incorrect to say that the members of the Council were not legislators, for they had to legislate. He appealed to the Council to act in a more up-to-date manner.

Dr. ROXBOROUGH was in favour of giving the power of electing the President of the College to the Members, and he maintained that the position would be one of much more dignity than it was at the present time. The rectorship of a Scotch university was a position of great importance and dignity, and yet the rector was elected by a popular electorate.

After Sir VICTOR HORSLEY had briefly replied the resolution was put to the vote, and it was carried *nemine contradicente*.

Dr. DICKINSON then introduced the following resolution:—

That this meeting regrets that the Council has not called a special general meeting of Fellows and Members to consider the National Insurance Act.

Dr. LAWRENCE seconded and it was carried.

There were present 86 Members and 18 Fellows, including 10 members of Council.

Public Health.

REPORTS OF SCHOOL MEDICAL OFFICERS.

County Borough of Halifax.—As a commentary on the figures for pulmonary tuberculosis in the county of Cumberland it is interesting to note those obtained by examinations in Halifax by Dr. D. M. Taylor. Among 2363 children inspected there were 25 cases of pulmonary tuberculosis, or only 0·9 per cent., the methods used for diagnosis being careful physical examination. The difference between 2·9 per cent. or 2·2 per cent. and 0·9 per cent. can hardly depend on difference in incidence in two places in the North of England, and suggests forcibly the need for adjusting methods of diagnosis to some definite standard. With regard to attendance, it is noted that external eye diseases, skin diseases, impetigo, vermin, itch, and ringworm account for 30 per cent. of the attendances lost during 1911, and that all these defects could be treated in a properly equipped room. One epidemic of impetigo was traced to infection by plasticine. Methods of treatment are not, however, satisfactory, only 50 per cent. of cases of enlarged tonsils and adenoids needing active treatment obtained it, and very little is done for teeth, although 34 per cent. had four or more carious teeth. A large part of the report is devoted to the open-air school at Bermerside, and some good photographs are given. There were 144 scholars on the admission register, and improvement was noted in a large proportion, but a persistent form of anæmia was noted which improved little. Two-thirds of the pre-tubercular cases benefited, 50 per cent. of the early phthisis group, the tubercular gland cases cleared

up, neurotic cases did well, rickets also, and the convalescence of the later stages of chorea was shortened. The Bermerside residential open-air school for 30 children is also reported on at length, and, although too lately established to warrant much emphasis on results, has yielded some striking immediate benefits. The average increase in weight for the first batch of scholars during the three months, December, January, and February, was 4·7 lb. Dr. Taylor thinks that in the end residential open-air schools may be found cheaper than open-air day schools.

Borough of Great Yarmouth.—Mr. A. N. Stevens notes that Great Yarmouth was the first town to institute an Inspection Clinic, and 11 per cent. of the total number of children passed through it during the year. A great reduction in ringworm cases is observed during the four years of work. No arrangements for treatment by the authority exist, and out of 1007 children needing medical treatment only 206 obtained it. A special class has been formed for mentally defective girls. Two school nurses are employed who also act under the sanitary authority as lady health visitors.

City of Bristol.—Dr. T. A. Green urges the establishment of an open-air school on the ground of "the increasing number of children excluded for phthisis and other diseases." Ringworm treatment is conducted at five centres, a semi-deaf class is held, and the medical inspectors of the Deaf Institution and an Industrial School treat such cases of illness as may arise amongst the children. A total number of 14,439 children were inspected, and 23·53 per cent. found to be free from defects needing treatment. There are two schools for mentally defective children who remain under the care of an after-care committee on leaving school. 141 physically defective children are also provided for in premises used for the mentally defective. Treatment of defects found does not appear to be very thorough, and the care committee organisation does not appear altogether satisfactory. The work of the authority in segregating special groups of cases, semi-deaf, semi-blind, mental and physical defectives, is, however, admirable.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In the 95 largest English towns, with an aggregate population estimated at 17,639,881 persons at the middle of this year, 8185 births and 5091 deaths were registered during the week ended Saturday, Nov. 23rd. The annual rate of mortality in these towns, which had been 14·0, 14·8, and 14·1 per 1000 in the three preceding weeks, rose to 15·0 per 1000 in the week under notice. During the first eight weeks of the current quarter the mean annual death-rate in these large towns averaged 13·9 per 1000, against 14·8 in London during the same period. The death-rates in the several towns last week ranged from 5·6 in Ilford, 5·8 in Dewsbury, 6·1 in Blackpool, 7·1 in Derby, and 7·2 in Ealing and in Enfield, to 21·4 in West Ham, 21·5 in Middlesbrough, 22·0 in Stockton-on-Tees, 22·2 in Preston, and 26·4 in Bootle.

The 5091 deaths from all causes in the 95 towns were 330 in excess of the number in the previous week, and included 552 which were referred to the principal epidemic diseases, against numbers rising from 421 to 513 in the four preceding weeks. Of these 552 deaths, 334 resulted from measles, 86 from infantile diarrhœal diseases, 49 from whooping-cough, 41 from diphtheria, 25 from scarlet fever, and 17 from enteric fever, but not one from small-pox. The mean annual death-rate from these epidemic diseases last week was equal to 1·6 per 1000, against 1·5 in each of the two preceding weeks. The deaths attributed to measles, which had been 224, 296, and 293 in the three preceding weeks, rose to 334 last week, which was the highest number recorded in any week of the current year; the highest annual death-rates last week from this disease were 2·9 in Northampton, in Birmingham, in Middlesbrough, and in Newcastle-on-Tyne, 3·3 in Coventry, 3·8 in East Ham, 4·1 in West Hartlepool, 5·1 in Bootle, and 6·6 in West Ham. The deaths of infants under 2 years of age referred to diarrhœa and enteritis, which had been 107, 82, and 85 in the three preceding weeks, were 86 last week, and included 27 in London, 8 in Liverpool, 6 in Manchester, 4 in Birmingham, 3 in Nottingham, 3 in Burnley, and 3 in Sheffield. The fatal cases of whooping-cough, which had been 36, 30, and 41 in the three preceding weeks, rose to 49 last week; 17 deaths were registered in London and its suburban districts, 6 in Liverpool, 4 in Stoke-on-Trent, and 3 in Bristol. The deaths attributed to diphtheria, which had been 43, 52, and 52 in the three preceding weeks, declined to 41 last week; 5 deaths occurred in London, 4 in Portsmouth, 4 in Manchester, 3 in Birmingham, and 3 in Preston. The deaths referred to scarlet fever, which had been 24, 32, and 27 in the three preceding weeks, were 25 last week, and included 6 in London, 5 in Birmingham, and 2 in St. Helens. The fatal cases of enteric fever, which had been 15, 18, and 14 in the three preceding weeks, were 17 last week, of which 2 were registered in London and 2 in Birmingham.

The number of scarlet fever patients in the Metropolitan Asylums and in the London Fever Hospital, which had been 2279, 2350, and 2335 at the end of the three preceding weeks, were 2336 on Saturday last; 296 new cases of this disease were admitted to these institutions during the week, against 279, 326, and 254 in the three preceding weeks. These hospitals also contained on Saturday last 913 cases of diphtheria, 699 of measles, 233 of whooping-cough, and 46 of enteric fever, but not one of small-pox. The 1354 deaths from all causes in London were 104 in excess of the number in the previous week, and were equal to an annual death-rate of 15·6 per 1000. The deaths referred to diseases of the respiratory system, which had been 274, 227, and 243 in the three preceding weeks, rose to 283 last week, and were 40 in excess of the number in the corresponding week of last year.

Of the 5091 deaths from all causes in the 95 towns last week, 191 resulted from different forms of violence and 426 were the subject of coroners' inquests. The causes of 34, or 0·7 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified in Sheffield, Leeds, Bristol, West Ham, Bradford, Newcastle-on-Tyne, Nottingham, and in 68 other smaller towns. The 34 uncertified causes of death last week included 8 in Birmingham, 5 in Liverpool, 2 in Stoke-on-Trent, 2 in Bootle, and 2 in South Shields.

HEALTH OF SCOTCH TOWNS.

In the 18 largest Scotch towns, with an aggregate population estimated at 2,182,400 persons at the middle of this year, 1040 births and 753 deaths were registered during the week ending Saturday, Nov. 23rd. The annual rate of mortality in these towns, which had been 16·1, 15·4, and 16·3 per 1000 in the three preceding weeks, further rose to 18·0 per 1000 in the week under notice. During the first eight weeks of the current quarter the mean annual death-rate in these Scotch towns averaged 15·0 per 1000, against 13·9 in the 95 large English towns during the same period. Among the several Scotch towns the death-rates last week ranged from 10·0 in Motherwell, 10·6 in Hamilton, and 12·4 in Ayr, to 20·8 in Paisley, 22·5 in Kilmarnock, and 25·1 in Leith.

The 753 deaths from all causes were 70 in excess of the number in the previous week, and included 48 which were referred to the principal epidemic diseases, against 43 and 37 in the two preceding weeks. Of these 48 deaths, 15 resulted from whooping-cough, 11 from infantile diarrhœal diseases, 10 from diphtheria, 6 from scarlet fever, 2 from enteric fever, 2 from measles, and 2 from small-pox. These 48 deaths from the principal epidemic diseases were equal to an annual death-rate of 1·1 per 1000, against 1·6 per 1000 in the 95 large English towns. The deaths attributed to whooping-cough, which had been 14, 8, and 11 in the three preceding weeks, rose to 15 last week, and included 10 in Glasgow and 3 in Govan. The deaths of infants under two years of age referred to diarrhœa and enteritis, which had been 16, 12, and 10 in the three preceding weeks, were 11 last week, of which number 5 were registered in Glasgow and 2 in Dundee. The fatal cases of diphtheria, which had declined from 12 to 6 in the four preceding weeks, rose to 10 last week, and included 6 in Glasgow. The 6 deaths attributed to scarlet fever were 2 in excess of the average in the earlier weeks of the quarter, and included 3 deaths in Glasgow. The fatal cases of measles occurred in Glasgow and Falkirk respectively, those of enteric fever in Aberdeen and Leith respectively, and those of small-pox in Kirkcaldy.

The deaths referred to diseases of the respiratory system in the 18 Scotch towns, which had been 139, 127, and 162 in the three preceding weeks, further rose to 195 last week; 27 deaths were attributed to different forms of violence, against numbers declining from 35 to 19 in the three preceding weeks.

HEALTH OF IRISH TOWNS.

In the 22 town districts of Ireland, having an aggregate population estimated at 1,154,150 persons at the middle of this year, 532 births and 409 deaths were registered during the week ending Saturday, Nov. 23rd. The annual rate of mortality in these towns, which had declined from 18·3 to 17·0 per 1000 in the three preceding weeks, rose to 18·5 per 1000 in the week under notice. During the first eight weeks of the current quarter the mean annual death-rate in these Irish towns averaged 17·4 per 1000; in the 95 large English towns the corresponding death-rate did not exceed 13·9, while in the 18 Scotch towns it was equal to 15·0 per 1000. The annual death-rate in the several towns last week was equal to 20·2 in Dublin (against 15·6 in London), 18·4 in Belfast, 12·9 in Cork, 16·6 in Londonderry, 42·0 in Limerick, and 17·1 in Waterford, while in the remaining 16 smaller towns the mean rate did not exceed 12·9 per 1000.

The 409 deaths from all causes in the 22 Irish towns were 32 in excess of the number in the previous week, and included 45 which were referred to the principal epidemic diseases, against 39 and 40 in the two preceding weeks. Of these 45 deaths, 24 resulted from measles, 12 from diarrhœal diseases, 4 from scarlet fever, 3 from whooping-cough, 1 from enteric fever, and 1 from diphtheria, but not one from small-pox. These 45 deaths from the principal epidemic diseases were equal to an annual death-rate of 2·1 per 1000; the death-rate from these diseases last week in the 95 large English towns was equal to 1·6, while in the 18 Scotch towns it did not exceed 1·1 per 1000. The deaths attributed to measles, which had been 36, 23, and 23 in the three preceding weeks, were 24 last week, and comprised 13 in Belfast, 9 in Limerick, and 2 in Dundalk. The deaths referred to diarrhœa and enteritis, which had been 14, 5, and 11 in the three preceding weeks, were 12 last week, and with one exception related to infants under two years of age; 8 deaths were recorded in Dublin, 3 in Belfast, and 1 in Clonmell. The 4 fatal cases of scarlet fever, 2 of which occurred in Belfast, were equal to the average in the four preceding weeks. The 3 deaths attributed to whooping-cough coincided with the number in the previous week, and were registered in Dublin, Ballymena, and Clonmel respectively. The fatal cases of enteric fever and diphtheria occurred in Dublin.

The deaths referred to diseases of the respiratory system, which had been 74, 93, and 83 in the three preceding weeks, rose to 91 in the week under notice. Of the 409 deaths from all causes, 109, or 27 per cent., occurred in public institutions, and 5 resulted from different forms of violence. The causes of 16, or 3·9 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; in the 95 large English towns the proportion of uncertified causes of death last week did not exceed 0·7 per cent.

VITAL STATISTICS OF LONDON DURING OCTOBER, 1912.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs. With regard to the notified cases of infectious diseases it appears that the number of persons reported to be suffering from one or other of the ten diseases specified in the table was equal to an annual rate of 6·8 per 1000 of the population, estimated at 4,519,754 persons in the middle of the year; in the three preceding months the rates were 4·9, 4·7, and 6·3 per 1000 respectively. The lowest rates last month were recorded in Kensington, Chelsea, the City of Westminster, St. Marylebone, and Stoke Newington; and the highest rates in Hammersmith, Holborn, Stepney, Bermondsey, Greenwich, and Woolwich. Scarlet fever was again more prevalent than it had been in recent preceding months; among the several boroughs the greatest proportional prevalence last month was recorded in Hammersmith, St. Pancras, Islington, Holborn, Stepney, Southwark, Bermondsey, Camberwell, Greenwich, Lewisham, and Woolwich. The number of scarlet fever patients in the Metropolitan Asylums Hospitals, which had been 1482, 1511, and 1845 at the end of the three preceding months, had further risen to 2242 at the end of last month; the weekly admissions averaged 303, against 198, 190, and 277 in the three preceding months. The prevalence of diphtheria showed a decline from that recorded in the previous month; this disease was proportionally most prevalent in Hampstead, St. Pancras, Holborn, City of London, Bethnal Green, Deptford, Greenwich, Lewisham, and Woolwich. The Metropolitan Asylums Hospitals contained 897 diphtheria patients at the end of October, against 825, 827, and 941 at the end of the three preceding months; the weekly admissions averaged 110, against 112, 98, and 141 in the three preceding months. The prevalence of enteric fever showed a considerable decline from that recorded in the preceding month; the greatest proportional prevalence of this disease was recorded last month in Hammersmith, Hackney, Islington, Stepney, Poplar, and Woolwich. There were 54 enteric fever patients under treatment at the end of last month in the Metropolitan Asylums Hospitals, against 33, 37, and 49 at the end of the three preceding months; the weekly admissions averaged 7, against 6, 6, and 10 in the three preceding months. The 32 cases of puerperal fever notified during the month included 5 in Bermondsey, 4 in St. Pancras, 3 in Islington, 3 in Stepney, 3 in Southwark, and 2 each in Kensington, Hackney, and Finsbury. Erysipelas was proportionally most prevalent in Hammersmith, Finsbury, Shoreditch, Bethnal Green, Stepney, Poplar, Southwark, and Bermondsey. The 5 cases of cerebro-spinal meningitis included 2 in Hackney; and the 14 cases notified as poliomyelitis included 4 in Stepney and 2 in Islington.

The mortality statistics in the table relate to the deaths of persons actually belonging to the several boroughs, the deaths occurring in institutions having been distributed among the boroughs in which the deceased persons had previously resided; the death-rates from all causes are further corrected for variations in the sex- and age-constitution of the populations of the several boroughs. During the five weeks ending Nov. 2nd the deaths of 6391 London residents were registered, equal to an annual rate of 15·5 per 1000; in the three preceding months the rates were 11·8, 12·1, and 12·5 per 1000. The death-rates last month ranged from 10·3 in Woolwich, 11·1 in Wandsworth, 11·5 in Lewisham, 12·3 in Deptford, 12·4 in Hampstead, and 12·6 in Greenwich, to 18·0 in Stepney, 18·3 in Southwark, 19·3 in Bethnal Green, 19·4 in Poplar, 22·0 in Finsbury, and 22·3 in Shoreditch. The 6391 deaths from all causes included 516 which were referred to the principal infectious diseases; of these, 219 resulted from measles, 19 from scarlet fever, 55 from diphtheria, 55 from whooping-cough, 13 from enteric fever, and 155 from diarrhœa and enteritis among children under two years of age. No death from any of these diseases was recorded last month in Stoke Newington; in the other boroughs they caused the lowest death-rates in Hammersmith, Hampstead, St. Pancras, Wandsworth, Lewisham and Woolwich; and the highest rates in Bethnal Green, Poplar, Stepney, Shoreditch, and Finsbury. The 219 deaths from measles were 144 in excess of the corrected average number in the corresponding period of the five preceding years; this disease was proportionally most fatal in Chelsea, Finsbury, Shoreditch, Bethnal Green, Stepney, Poplar, and Battersea. The 19 fatal cases of scarlet fever were 25 fewer than the corrected average number, and included 4 in Greenwich, and 2 each in St. Marylebone, Islington, and Hackney. The 55 deaths from diphtheria showed a decline of 3 from the corrected average number; the greatest proportional mortality from this disease was recorded in Holborn, Stepney, Greenwich, Lewisham, and Woolwich. The 55 fatal cases of whooping-cough were 6 in excess of the corrected average; the highest death-rates from this disease were recorded in Stoke Newington, Shoreditch, Bermondsey, Battersea, Camberwell, and Greenwich. The 13 deaths from enteric fever were 21 below the average, and included 4 in Islington and 2 each in Hammersmith, Hackney, Stepney, and Lambeth. The mortality from diarrhœa and enteritis among children under two years of age was proportionally greatest in Finsbury, Shoreditch, Stepney, and Southwark. In conclusion, it may be stated that the aggregate mortality in London during October from the principal infectious diseases, excluding diarrhœa, was 38·9 per cent. above the average.

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING OCTOBER, 1912.

(Specially compiled for THE LANCET.)

CITIES AND BOROUGHS.	Estimated population in the middle of 1912.	NOTIFIED CASES OF INFECTIOUS DISEASE.												DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.									Deaths from all causes.	Death-rate per 1000 living.†
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cerebro-spinal meningitis.	Poliomyelitis.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.*	Whooping-cough.	Enteric fever.	Diarrhœa and enteritis (under 2 years).	Total.	Annual rate per 1000 persons living.		
LONDON...	4,519,754	—	1645	645	2	62	1	32	532	5	14	2938	6·8	—	219	19	55	55	13	155	516	1·2	6391	15·5
West Districts.																								
Paddington	142,362	—	34	14	—	—	—	1	13	—	—	62	4·5	—	1	—	—	3	—	5	9	0·7	178	13·9
Kensington	171,746	—	34	7	—	2	—	2	12	—	—	57	3·5	—	6	—	1	1	—	7	15	0·9	240	15·7
Hammersmith	122,750	—	73	12	—	4	—	—	18	—	—	107	9·1	—	—	1	1	—	2	2	6	0·5	151	13·3
Fulham	155,402	—	57	26	—	2	—	1	15	—	1	102	6·8	—	4	—	—	1	—	4	9	0·6	203	14·2
Chelsea	65,397	—	8	7	—	1	—	—	3	—	—	19	3·0	—	5	1	1	—	—	2	9	1·4	84	13·9
City of Westminster	157,248	—	38	13	—	2	—	1	10	—	—	64	4·2	—	1	1	1	2	1	6	12	0·8	183	13·6
North Districts.																								
St. Marylebone	116,155	—	14	11	—	—	—	1	5	—	—	31	2·8	—	6	2	—	—	—	3	11	1·0	176	16·8
Hampstead	85,966	—	24	17	—	1	—	1	4	—	—	47	5·7	—	2	—	1	—	—	—	3	0·4	91	12·4
St. Pancras	216,145	—	84	42	—	2	—	4	17	—	—	149	7·2	—	3	—	3	1	—	3	10	0·5	338	17·0
Islington	326,398	—	140	44	—	7	—	3	29	1	2	226	7·2	—	16	2	5	3	4	15	45	1·4	497	16·5
Stoke Newington	50,581	—	10	1	—	—	—	—	4	—	1	16	3·3	—	—	—	—	—	—	—	—	—	70	15·0
Hackney	222,986	—	79	27	—	5	—	2	26	2	1	142	6·6	—	1	2	—	1	2	8	14	0·7	311	15·1
Central Districts.																								
Holborn	48,026	—	23	15	—	1	—	—	5	—	—	44	9·6	—	2	—	4	1	—	—	7	1·5	76	17·8
Finsbury	86,130	—	24	13	—	—	—	2	24	1	1	65	7·9	—	29	—	2	2	—	5	38	4·6	175	22·0
City of London	18,695	—	6	6	—	—	—	—	2	—	—	14	7·8	—	—	—	1	—	—	1	2	1·1	26	15·9
East Districts.																								
Shoreditch	110,430	—	25	11	1	—	—	—	21	—	—	58	5·5	—	27	—	1	3	—	6	37	3·5	226	22·3
Bethnal Green	127,985	—	37	32	—	—	—	1	20	—	1	91	7·4	—	18	—	2	2	—	4	26	2·1	235	19·3
Stepney	277,315	—	175	31	—	6	1	3	49	—	4	269	10·1	—	33	1	7	6	2	15	64	2·4	457	18·0
Poplar	161,597	—	58	27	—	8	—	—	32	—	1	126	8·1	—	24	1	2	1	—	5	33	2·1	292	19·4
South Districts.																								
Southwark	190,017	—	78	32	—	3	—	3	40	—	—	156	8·6	—	6	1	2	2	—	16	27	1·5	328	18·8
Bermondsey	125,260	—	67	15	1	1	—	5	24	—	—	113	9·4	—	9	1	1	3	—	5	19	1·6	205	17·5
Lambeth	297,560	—	71	26	—	4	—	1	30	—	1	133	4·7	—	6	1	2	5	2	13	29	1·0	425	15·4
Battersea	167,589	—	57	14	—	—	—	—	18	—	—	8 9	5·5	—	14	—	2	5	—	4	25	1·6	220	14·7
Wandsworth	321,881	—	108	33	—	4	—	1	33	—	—	179	5·8	—	4	1	2	—	—	7	14	0·5	323	11·1
Camberwell	261,591	—	104	34	—	1	—	—	21	1	1	162	6·5	—	—	—	1	7	—	11	19	0·8	358	14·8
Deptford	109,377	—	41	21	—	2	—	—	16	—	—	80	7·6	—	—	—	2	2	—	4	8	0·8	123	12·3
Greenwich	95,994	—	55	28	—	2	—	—	10	—	—	93	10·1	—	1	4	3	3	—	2	13	1·4	113	12·6
Lewisham...	165,249	—	69	37	—	1	—	—	16	—	—	123	7·8	—	—	—	4	1	—	1	6	0·4	175	11·5
Woolwich...	121,932	—	52	51	—	3	—	—	15	—	—	121	10·3	—	1	—	4	—	—	1	6	0·5	112	10·3
Port of London	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

*Including membranous croup. † The death-rates are corrected for variations in sex- and age-constitution of the populations of the several boroughs, the population of England and Wales being taken as the standard.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

IN accordance with the provisions of Order in Council of April 1st, 1881, Surgeon Charles Robert Worthington has been allowed to withdraw from His Majesty's Naval Service with a gratuity (dated Nov. 21st, 1912).

The undermentioned surgeons have been promoted to the rank of Staff-Surgeon in His Majesty's Fleet (dated Nov. 21st, 1912):—Sidbrooke Frank Cope, Kenelm Digby Bell, Horace Bryden Hill, Henry Mounsey Braithwaite, Duncan Gordon Addison-Scott, Lawrence Charles Hunt, Arthur Sylvester Bradley, Percy Montgomery Rivaz, James Richard Alexander Clark-Hall, Henry Cooper, James McAlister Holmes, Ernest Davis Rutherford, Richard Willan, Alfred Oswald Hooper, Robert Hunter McGiffin, and Patrick Duncan MacIver Campbell.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel George E. Hale, D.S.O., retires on retired pay (dated Nov. 23rd, 1912).

Colonel H. O. Trevor has taken up duty as Assistant Director of Medical Services at Headquarters of the Cork District.

Lieutenant Thomas E. Osmund is confirmed in his rank.

Lieutenant-Colonel R. W. Wright has been transferred from the Military Hospital at Fyzabad to Mhow Cantonment. Lieutenant-Colonel T. Daly has returned home from India for duty, on completion of a tour of service in command of the Military Hospital at Peshawar. Lieutenant-Colonel C. J. MacDonald has been appointed Senior Medical Officer at Tientsin and Officer Commanding the Royal Army Medical Corps Detachments in North China. Lieutenant-Colonel A. J. Luther has embarked for a tour of service in South Africa. Lieutenant-Colonel C. C. Reilly, lately surgeon to the Royal Military Academy at Sandhurst, has taken up duty in command of the Military Hospital at Colaba, Bombay. Lieutenant-Colonel W. T. Mould has been selected for appointment to hold charge of the Military Hospital at Barrackpore. Lieutenant-Colonel D. M. O'Callaghan has taken over charge of the Surgical Wards in the Cambridge Hospital at Aldershot. Lieutenant-Colonel E. A. Burnside has been selected for appointment to command the Military Hospital at Bangalore, in succession to Lieutenant-Colonel J. S. Green.

Major A. L. A. Webb, specialist sanitary officer, Sierra Leone Protectorate, has arrived home on leave of absence from the West Coast of Africa. Major S. F. St. D. Green, specialist in midwifery and diseases of women and children to the Aldershot Command, has embarked for a tour of service in India. Major J. S. Bostock has been transferred from the Military Hospital at Ranikhet to Meerut Cantonment. Major S. O. Hall has left the Military Hospital at Fermoy and embarked for a tour of service in India. Major H. A. Bransbury, specialist in dermatology and venereal diseases, has been transferred from the Military Hospital at Ahmednagar to Belgaum Cantonment. Major E. P. Hewitt, at present stationed at Kamptee, has been granted six months' leave of absence home from India on medical certificate. Major M. P. Corkery, lately holding charge of the Bacteriological Research Laboratory at Brigade Headquarters, Nasirabad, has been directed to join the Irish Command on Dec. 21st next, and on arrival will be appointed to the Cork District for duty. Major C. H. Furnivall has taken up duty at the Military Hospital, Quetta Cantonment, on transfer from Ziarat.

Captain W. Egan has been transferred to the home establishment on the expiration of his leave of absence. Captain B. Johnson, officer commanding the Military Hospital at Thayetmyo Cantonment, Burma, has been appointed to hold collateral charge of the Civil Surgeoncy at Thayetmyo, in succession to Captain R. Kelsall, proceeding on leave of absence. Captain A. W. Sampey has been transferred from the Military Hospital at Naini Tal to Fyzabad Cantonment. Captain H. V. Bagshawe, medical officer at Aberystwyth Camp, has embarked for a tour of service in Egypt, and on arrival will be appointed to the Military Hospital at Cairo. Captain F. Fortescue has taken over medical charge of the 62nd Regiment of Punjabis and of the Cantonment Hospital at Benares. Captain A. L. Foster, at present serving in India, has been granted eight months' general leave of absence. Captain B. A. Odlum has been transferred from the Military Hospital at Bloemfontein to Simonstown for duty. Captain W. J. Tobin has taken up duty at the Military Hospital, Bangalore, on transfer from Bellary Cantonment, Madras Presidency. Captain G. W. G. Hughes and Captain J. E. Powell have joined the Royal Army Medical College for the promotion courses to the rank of Major. Captain H. G. Gibson, on return from a tour of service at Malta, has been appointed for duty in the Irish Command. Captain C. Ryley has been appointed for duty at Bermuda. Captain A. E. B. Wood, on the termination of his leave of absence, has been directed to embark for service in North China. Captain P. Sampson has been ordered to join the Irish Command on Dec. 21st next, and on arrival will be appointed to the Dublin District for duty. Captain A. C. H. Suhr has been transferred from Malta to the Straits Settlements. Captain A. Dawson has been selected for appointment as Staff-Surgeon at Steamer Point, Aden, and Medical Officer to the 23rd (Fortress) Company of the Third Sappers and Miners. Captain A. N. Fraser has left the London District and embarked for a tour of duty at Singapore. Captain J. W. Houston has taken up duty at Belgaum in charge of the Bacteriological Research Laboratory at Brigade Headquarters. Captain R. O'Kelly has joined for duty at Delhi.

INDIAN MEDICAL SERVICE.

Colonel P. Hehir has taken up the appointment of Assistant Director of Medical Services to the Burma Division.

Lieutenant-Colonel B. B. Grayfoot has been selected for appointment as Assistant Director of Medical Services to the Karachi Brigade, in succession to Colonel R. B. Roe, transferred as Assistant Director of Medical Services to the Sirhind and Jullundur Brigades. The Honourable Lieutenant-Colonel S. H. Henderson, officiating Inspector-General of Prisons in the United Provinces of Agra and Oudh, has been granted privilege leave combined with furlough for a total period of 13 months. Lieutenant-Colonel C. Duer has been granted six months' extension of leave of absence home from India. Lieutenant-Colonel J. Crimmin, V.C., C.I.E., has relinquished medical charge of His Majesty's Common Prison and House of Correction at Bombay to Major E. F. Gordon-Tucker.

Major M. Dick, civil surgeon at Meiktila, Burma, has been granted privilege leave combined with furlough home from India for one year and six months. Major A. C. MacGilchrist has been placed on special duty to investigate the prevalence of stegomyia in the Port of Calcutta. Major E. R. Parry, superintendent of the Central Jail at Dacca, has been selected for appointment as Superintendent of the Central Jail at Midnapore. Major J. C. S. Oxley, civil surgeon, has been granted furlough for six weeks in extension of the combined leave of absence home from India previously granted to him. Major H. J. Walton, civil surgeon at Saharanpur, has been deputed on special duty to the Central Research Institute of India at Kasauli. Major J. Mulvany, at present officiating as Superintendent of the New Central Jail at Kalighat, has been appointed to officiate as Inspector-General of Prisons in the Bengal Presidency during the leave of absence of Lieutenant-Colonel W. J. Buchanan. Major W. D. Hayward has been appointed to officiate as Medical Storekeeper to the Government of Madras during the absence on leave of Major W. G. Richards. Major N. R. J. Rainier, civil surgeon at Saugor, Central Provinces, has been granted one month's privilege leave of absence. Major G. E. Stewart has taken up the appointment of Deputy Sanitary Commissioner of the Central Registration District, Calcutta, in succession to Captain A. F. Hamilton. Major C. C. S. Barry, superintendent of the Rangoon General Hospital, has been granted privilege leave, combined with furlough for eight months. Major A. Leventon, civil surgeon at Lakhimpur, has been appointed to officiate as Civil Surgeon of the First Class, vice Major E. C. MacLeod on leave of absence. Major P. F. Chapman and Major W. S. Willmore have arrived home on leave of absence from India.

Captain A. D. White, at present officiating as second resident surgeon in the Presidency General Hospital, Calcutta, has been appointed *sub. pro tem.* in that appointment. The services of Captain R. B. S. Sewell, surgeon naturalist to the Marine Survey of India, have been placed at the disposal of the Home Department for employment under the Government of Bengal. Captain J. S. O'Neill, plague medical officer at Ghazipur, has been appointed to

Port of London ... ...
*Including membranous croup. † The death-rates are corrected for variations in sex- and age-constitution of the populations of the several boroughs, the population of England and Wales being taken as the standard.

hold charge of plague prevention duties at Azamgarh during the absence on leave of Captain T. D. Murison. Captain J. W. Little, second-class agency surgeon, has been appointed Agency Surgeon at Maskat on return from leave of absence. Captain C. G. Seymour has been selected for appointment as Specialist in the Prevention of Disease and to hold charge of the Bacteriological Research Laboratory at Brigade Headquarters, Dehra Dun. Captain R. S. Townsend, plague medical officer at Aligarh, has been granted privilege leave of absence for 1 month and 21 days. The services of Captain W. J. Collinson have been placed temporarily at the disposal of the Government of the United Provinces of Agra and Oudh for employment on plague prevention duty. Captain P. K. Tarapore, officiating superintendent of the Mandalay Central Jail, has been appointed superintendent *sub. pro tem.* The services of Captain A. W. Greig have been replaced at the disposal of the Government of India. Captain R. J. Bradley and Captain K. W. Mackenzie have arrived home on leave of absence from India. Captain F. H. Salisbury, at present officiating as superintendent of the Central Jail at Mindapore, has been appointed to officiate as superintendent of the Central Jail at Dacca, in succession to Captain W. G. Hamilton, granted leave of absence. The services of Captain A. Whitmore have been placed permanently at the disposal of the Government of Burma. Captain D. G. Rai has been transferred to Nellore. Captain P. S. Mills, plague medical officer, on return from leave of absence, has been appointed to Hoshiarpar for duty.

Special Reserve of Officers.

Royal Army Medical Corps.

Lieutenant Robert Green is confirmed in his rank.

Territorial Force.

Royal Army Medical Corps.

2nd North Midland Field Ambulance, Royal Army Medical Corps: Lieutenant Albert J. Riddett to be Captain (dated Oct. 29th, 1912).

1st Scottish General Hospital, Royal Army Medical Corps: Captain James Smart, from the 2nd Highland Field Ambulance, Royal Army Medical Corps, to be Captain (dated Oct. 15th, 1912). Lieutenant-Colonel George M. Edmond resigns his commission (dated Nov. 23rd, 1912).

3rd South Midland Field Ambulance, Royal Army Medical Corps: Lieutenant Charles F. Walters resigns his commission (dated Nov. 27th, 1912).

2nd Wessex Field Ambulance, Royal Army Medical Corps: Lieutenant Thomas P. Puddicombe to be Captain (dated Oct. 27th, 1912).

Attached to Units other than Medical Units.—Lieutenant William J. Hoyten to be Captain (dated Oct. 21st, 1912). Captain George F. Whyte, to be Major (dated Nov. 7th, 1912). Captain Frederick S. Edwards resigns his commission (dated Nov. 23rd, 1912).

For Attachment to Units other than Medical Units.—Andrew Baxter to be Lieutenant (dated Oct. 7th, 1912).

Archiv für Schiffs- und Tropen-Hygiene.

In the February numbers there is a paper by Dr. Vortisch van Vloten, who, after long experience in foreign missions, concludes, like W. E. Deeks, who has recently written from Panama to the *Journal of Tropical Medicine*, that infants can be brought up in the tropics quite safely on condensed milk. He has never seen a case of rickets in a child so fed. Speaking generally, he advises that one part of sweetened be mixed with two parts of unsweetened condensed milk and 20 of water, giving less water in the mixture when the child gets older. He prints a valuable table showing by chemical analyses the value of different brands of condensed milk. Dr. Schüffner writes from Sumatra that he treats tropical ulcers of the leg, first by general cleaning, then he clips away with scissors the ragged edges, and then uses chloride of zinc (10 per cent.), after which the ulcers slowly heal. Salvarsan is only a specific if syphilis is also present. Dr. Cammer-Meyer, at Boma in the Congo, recommends scharlachroth in powder to be applied to ulcers of the legs in the tropics after they have been cleaned up and painted with tincture of iodine. They then only need to be dressed every two or three days, and heal well. Professor Dr. Schilling and Dr. Naumann have found in Berlin that when arsenophenylglycin is injected intravenously into rabbits, most of the arsenic is in 24 hours found in the blood serum, the cells of organs having taken up very little. Arsenic is notably absent from the cells of the brain and spinal cord, and that, they suggest, is why arsenic produces only a palliative, but no curative, effect on patients with sleeping sickness who have marked involvement of the nervous system. Dr. H. Schäfer reports from the Cameroons that he has constantly found Porocephalus moniliformis larvæ in the liver, &c., of a wild pig—a potamochœrus, common in that colony. He suggests that the infection of the natives (19 in 150 post-mortem examinations) occurs through drinking water, and that the larvæ bore through the intestine, encyst themselves there for a while under the peritoneum, which they ultimately pierce to reach the liver. Dr. C. C. Bass, assistant professor of tropical medicine in the Tulane University, New Orleans, has a paper on Complement, translated into German by Dr. A. McShane, demonstrator in the same school. Human blood when fresh drawn contains little complement; it forms later if the blood be kept at a low temperature, but none forms if a fever temperature is maintained (100°–104° F.) This last is the condition in pyrexia, and then, however much amboceptor (antitoxin) has developed in the blood, there will be no bacteriolysis, for want of complement. If, for example, one makes a blood culture late in typhoid fever there will be at the time little complement in the blood, but if it be incubated at 37° C. complement will gradually form, and, there being probably plenty of amboceptor present, bacteriolysis will occur, the culture probably proving sterile, and unjustly so. In such cases complement formation should be prevented, as by the addition of bile or by keeping the temperature above 100° F. (38° C.). By thus excluding complement Dr. Bass has succeeded in growing all three forms of malarial parasite, even for seven weeks continuously. Protozoal cultures should be anaerobic. This question of complement has important relations to the pathology of local abscess. The temperature is locally raised, complement formation is locally inhibited, the leucocytes ingest the bacteria, but lysis does not occur. Aspirate the pus: serum from the surrounding tissues transudes into the cavity bringing complement, and the infection may be overcome. And perhaps the good effects of ice-bags in the treatment of inflammation may be due to this increase of complement formation at the lowered temperature they have produced.

Archives de Médecine et Pharmacie Navales.

Several articles by Italian surgeons are abstracted in the September number. The well-known Dr. Rho recommends tincture of iodine as an application for burns immediately after they occur; it causes smarting at the time which soon passes off, and there is no pain afterwards. If in a case not so treated suppuration did occur nothing cleans the inflamed surface like peroxide of hydrogen, "which was invariably victorious after the earthquake at Messina." That earthquake is used to point another moral, for in the after-history of the injuries that occurred there functional nervous sequelæ "shone by their absence." This the cynical reporter explains by observing that no one was there from whom compensation could be extorted; there was nothing for the patient but to get well. It is laid down as better to give a man a lump sum rather than a pension as compensation for small accidents, for he knows then he has got all he can, and he recovers himself and sooner becomes a profitable member of society.

Attack on a Medical Officer by Outlaws.

The *Allahabad Pioneer* reports from Zhob Valley that Lieutenant M. Purvis, I.M.S., medical officer of the 14th Sikhs, while travelling near Murgha was attacked by a gang of outlaws. Two sowars (private soldiers) of his escort were killed and one was wounded, while one or two others are reported as missing. Lieutenant Purvis himself escaped unhurt.

University of Oxford.—The following examiners for medical degrees have been appointed:—Organic chemistry, Dr. F. D. Chattaway; pharmacology, Dr. W. E. Dixon, F.R.S.; human anatomy, Professor Arthur Thomson; human physiology, Dr. W. Ramsden; pathology, Dr. H. M. Turnbull; forensic medicine, hygiene and public health, Dr. F. J. Smith; medicine, Dr. Theodore D. Acland; surgery, Mr. George Heaton; and obstetrics, Dr. H. Russell Andrews.

Correspondence.

"Audi alteram partem."

THE DANGERS OF ELECTRICITY.

To the Editor of THE LANCET.

SIR,—Those who were fortunate enough to hear the very able and illuminating address on "The Dangers of Electricity" by Dr. S. Jellinek of Vienna, given before the section of Electro-therapeutics of the Royal Society of Medicine on Nov. 15th, must have realised there were some important yet simple facts placed before us which in the public interest are not as generally known as they should be.

Much commendable work has been done in teaching the principles of rendering first aid in nearly all kinds of accidents, and one of the results of this teaching is that most people of average intelligence know what should be done in a case of drowning, for instance. It is an accident that we as a maritime nation are more or less familiar with. Every medical man and quite a large number of the public are capable of dealing with this emergency if called upon to do so. But if they were suddenly confronted with a case of severe electrical shock—the patient unconscious and to all appearances dead—probably few medical men, and still fewer laymen, would know how to deal with it in the correct way. Yet the principles involved are quite simple, and the proper method to adopt is practically the same as for drowning.

There are only two fundamental facts that need be impressed upon the minds of everyone. The first is that death from electrical shock is only an apparent death at first; and secondly, whatever the conditions or severity of the accident, there is practically always a time, varying from a few minutes upwards, during which it is possible to resuscitate the victim by artificial respiration if resorted to at once. So important is it to commence artificial respiration quickly that it is the first duty of the bystander to see to this before everything else. He must not leave the victim to summon medical aid—it may be too late by the time the doctor arrives—but he should send for medical assistance if there is anyone else present.

If the victim has fallen clear of electrical contact first-aid may be given at once, but if he remains in contact with the circuit the first step is to get him free. This is dangerous to the rescuer unless care is taken, but the necessary precautions are simple enough for any voltage likely to be encountered by the public—the highest being that used for railways and tramways, about 600 volts. If, then, the victim remains in contact with the circuit, his body must not be touched by his rescuer, but the latter may pull him out of contact by hauling on the clothing, or he may take off his own coat, insert his hands in the sleeves, and then handle the victim with little or no risk to himself. Almost any article of clothing or material may be used, provided it is dry and of moderate thickness. Artificial respiration must be persevered with for at least two hours, or until the patient revives; in many cases it may be only a few minutes. After return to consciousness complete rest is essential for a day or two, and under no circumstances must the man be allowed to return to work at once, as he may wish to do if the shock has been a light one. With the prompt application of first aid practically every victim can be revived, and of these nearly all will make a complete and permanent recovery provided they were previously in a normal state of health.

In view of the extensive use of electricity it is a matter for congratulation that severe electrical accidents are comparatively uncommon. For this we have to thank the more or less elaborate precautions insisted upon by the authorities, including the insurance companies. This, however, is no excuse for not being prepared for the emergency, and a wide dissemination of the simple facts bearing on the matter presents no real difficulty. If every organisation, Government and other, having to do with the treatment of emergency or accident will incorporate the necessary directions in their rules and teaching, this knowledge will very quickly become as widely known as that relating to drowning. The necessity for this is shown by an instance quoted by Mr. G. Scott Ram, of the Home Office, on the occasion of the meeting already referred to. A medical man was summoned to an electrical accident such as I have mentioned. On being told that the victim had been in contact with a tension of 2000 volts he declared the man dead and ordered the latter to be taken away. The other workmen present were not satisfied and decided "to have another go at him." Result: the victim revived and recovered. The doctor was not to blame; he was but one of many who had the idea that a shock from a tension of 1500 volts or over would always cause death. We now know that the voltage is but one of many factors that determine the effect of an electrical shock, that practically every case can be revived, and that most of these will make a complete recovery if first-aid is promptly forthcoming and properly applied.

I am, Sir, yours faithfully,

REGINALD MORTON,
President, Section of Electro-therapeutics, Royal Society of Medicine.

Harley-street, W., Nov. 22nd, 1912.

THE HISTOLOGY OF EXPERIMENTAL RHEUMATISM.

To the Editor of THE LANCET.

SIR,—I hasten to assure Professor J. M. Beattie and Dr. E. W. Ainley Walker that I had no intention whatever of attributing to either of them anything but scientific motives in their work on the test for differentiating streptococci, and since the term "wreck" is a cause of offence I unhesitatingly withdraw it. Neither do I dispute the results obtained by these workers. It is in regard to the interpretation of their results that I find myself at variance with them.

Professor Beattie, for instance, in his paper in collaboration with Dr. Yates,[1] while carefully examining the reactions of a series of streptococci in sugar media with all precautions, makes no mention of the reaction given by these streptococci in neutral red broth anaerobically, yet this test is indispensable in my series for placing a streptococcus, and I am not surprised that without it he was unsuccessful. I venture to ask Professor Beattie to try the tests again on a series of streptococci isolated from the human body. I will not ask him to trouble himself with the rest of the tests, but let him examine these streptococci in neutral red broth for 48 hours anaerobically, and in lemco litmus raffinose and mannite for the same time aerobically. I shall be surprised if he does not find these three tests to help him to identify the three types salivarius, fæcalis, and pyogenes respectively. For on recovery from the human body salivarius constantly reduces neutral red and fails to change mannite, and while in half the cases it changes raffinose, in the other half it does not. Pyogenes, on the other hand, fails to reduce neutral red or to change raffinose; and whereas in the majority of cases it fails to change mannite, in some cases it does so. Fæcalis constantly reduces neutral red and changes mannite, but does not ferment raffinose, though it often decolourises the medium.

Now, as regards the pathogenetic functions of these three types of streptococcus, first for the rabbit (intravenous injection of a 48 hours broth culture), in my experience there is a great quantitative difference between the three types in regard to the dose necessary to produce a lethal effect. Whereas a comparatively small dose of pyogenes is fatal, large and perhaps repeated doses of the other two streptococci are required for this purpose. Moreover, while pyogenes kills in a few days with acute septicæmia, the other two streptococci produce a more chronic form of septicæmia, and the rabbit develops ultimately well-marked endocarditis. But in determining the pathogenetic ability of streptococci I have for some time past discarded rabbits in favour of mice, since the latter are in my experience better for this purpose and are also cheaper. I find that with mice, using a 48 hours broth culture of the streptococcus as soon after isolation as possible and injecting 1 c.c. subcutaneously, pyogenes kills the mouse, as a rule, within two or three days, whereas with salivarius and fæcalis the animals escape in the vast majority of cases. Thus, of 40 mice injected by me with the streptococci most abundant in quantitative cultures from the saliva of 20 normal individuals 36 escaped, and of the 4 that died

[1] Journal of Pathology, vol. xvi., p. 247.

none gave after death positive cultures of streptococcus. Similarly, Houston tested 100 streptococci from normal fæces in the same way, and found 96 per cent. of them non-pathogenetic. On the other hand, I have tested numerous examples of streptococcus pyogenes in the same way, and have found almost invariably that the mouse succumbs in a few days with acute septicæmia, the streptococcus being readily recoverable from the heart's blood or spleen.

As regards Dr. Ainley Walker, I remember getting his letter informing me that he was about to challenge my streptococcus tests, and I remember also replying to the effect that he was welcome to do so, but that these tests had proved for some time past useful in practice. Then appeared a paper[2] indicting the tests generally on the ground of variation shown by certain streptococci (source not stated) on subculture; and as he seemed to get such extraordinary variations I ventured to criticise him in the same journal. If I have in any way overstepped the limits of absolutely fair criticism in that article I offer my sincere apologies to Dr. Walker, and I think I know him well enough to say that he will at once accept them. At the time I did not know that this paper of his was merely the precursor of the full paper which has since appeared. As regards his latest paper[3] I fully accept his results, since they were clearly got with due precautions, but I reserve to myself the right to comment on his conclusions, mainly because they assail a position which I personally never took up. For since introducing the tests I have endeavoured to avoid the word species when referring to a type of streptococcus as distinguished by them. I have felt, and still feel, that whereas there are numerous types of streptococcus defined by them (more especially the three chief types already mentioned), it is premature to speak of species among streptococci. Similarly, when I have seen a typical bacillus coli, that on isolation from the intestine gave all the reactions of bacillus coli, lose when subcultured on gelatine over a period of three years its capacity of producing indol, its capacity of producing gas in glucose and lactose, and its capacity of clotting milk; when I have seen over and over again a culture of typhoid lose after several subcultures its specific capacity of agglutinating with serum of typhoid cases to such an extent as to become useless for Widal's test; and when I know by experience that perhaps the most specialised character of all—namely, virulence—disappears with extraordinary rapidity in many of the pathogenetic bacteria (e.g., the importance of primary cultures for a vaccine), but especially in the streptococci; I have grave doubts as to whether this fact of variability shown by streptococci in biochemical capacity on subculture, on which so much stress has been laid by Dr. Walker, really invalidates a provisional scheme of classification based on comparatively constant differences in biochemical and pathogenetic capacity exhibited by streptococci in the state in which they are on recovery from the human body. After all, it is something to be able to differentiate streptococcus pyogenes from other streptococci in cultures from the human body, and if the tests enable this to be done—and I maintain that they do so with ease—their introduction is more than justified.

I may add that I am particularly interested in Dr. Anderson's clinical observation confirmatory of the rôle of streptococci of the mouth in cases of rheumatism associated with bronchial catarrh. This observation is also of importance in reference to the recent article in your columns[4] on the gastric juice in such conditions by Dr. A. S. Woodwark and Mr. R. L. Mackenzie Wallis.

I am, Sir, yours faithfully,

Nov. 24th, 1912. M. H. GORDON.

To the Editor of THE LANCET.

SIR,—As the writers with Dr. E. H. Kettle of the original paper on this subject, one sentence of which has given rise to the correspondence in your last two numbers, we beg leave to make one or two observations, although the point at issue has no direct bearing on the actual investigations we published.

The "cultural classifications of streptococci" which we deemed to have been "proved unsound" were, as Dr. Gordon surmises, those introduced by him some years ago. This statement of ours which Dr. Gordon "emphatically denies" was not made in ignorance of the discrepancy between the value Dr. Gordon places on his tests and their usefulness in the hands of the other bacteriologists whom we named. There is no necessity for us to support our opinion since Dr. Gordon's denial of our statement has been most thoroughly met in your current issue by Professor Beattie and Dr. Ainley Walker. We do not at the present time accept as proved the constancy of Dr. Gordon's tests, and cannot therefore accept conclusions drawn therefrom.

Dr. Gordon's suggestion that we should examine histologically lesions produced by the inoculation of animals with streptococci obtained from the alimentary tract seems to indicate that he regards the classification of streptococci ultimately to depend upon inoculation experiments rather than cultural reactions. But we may point out that our work is not primarily concerned with Dr. Gordon's tests but with "the essential cause of rheumatism." We are perfectly prepared to accept the possibility of the "rheumococcus" being the same as some normal inhabitant of the alimentary tract; indeed, on clinical grounds we have accepted this as likely enough for a considerable time. But wherein lies the use of insisting upon this similarity until the connexion between the "rheumococcus" and rheumatism is admitted?

To our minds the important question is this: A streptococcus, obtained from a case clinically, anatomically, and histologically one of acute rheumatic infection, reproduces experimentally, not only the gross lesions, but the peculiar histological characteristics of human rheumatism; is it, then, admitted that this streptococcus is the cause of the rheumatic infection in the patient from whose blood or tissues it was obtained? If so, then its cultural reactions and variations and its normal habitat become matters of great practical importance; but if not, insistence upon the cultural classification of streptococci will continue, we fear, to retard rather than to aid the solution of the question of the infective essential cause of rheumatism.

We are, Sir, yours faithfully,

REGINALD MILLER.

Nov. 25th, 1912. CAREY COOMBS.

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[2] Proceedings of the Pathological Society, July, 1910.
[3] Proceedings of the Royal Society, June, 1912.
[4] THE LANCET, Oct. 5th, 1912, p. 942.

THE ANNUAL MEETING OF THE ROYAL COLLEGE OF SURGEONS: THE POSITION OF MEMBERS.

To the Editor of THE LANCET.

SIR,—I was very glad to hear Sir Alfred Pearce Gould's reply to Sir Victor Horsley on the question as to why Members of this College are not represented on the Council. Sir A. Pearce Gould is such an eminently fair and reasonable controversialist that it is a pleasure to listen to him, and we may be certain that he said everything that can be said from the point of view of the Council on this matter.

What did he say? (1) That the Council is not a Parliament nor a political body, and that therefore its members need not be elected as those of other political bodies are. (2) That the Council has only three chief functions to perform, all of which can be better performed without the assistance of Members. These are: (*a*) the care of the Hunterian Museum; (*b*) the supervision of the library; and (*c*) the ordering of the examinations. He further said (3) That it would be impossible to take a poll of the 17,000 Members.

As to this statement, I should like to be allowed to reply: (1) That the Council is already elected in the same way as most other bodies of a similar nature, but by a very limited electorate—viz., some 1500 Fellows—and that the proposal is only to extend the franchise to the larger number of Members. It is also proposed that the Members should only have a restricted representation on the Council, say some half dozen seats, and that the remaining 24 should be elected as at present by the Fellows.

Sir A. Pearce Gould cannot reasonably maintain that the discharge of the present limited functions of the Council would be in any way interfered with by the presence of Members, who are just as much interested in the welfare of the College as the Fellows. We know, however, from other sources, such as the reply of the Council to the Privy Council when this question was raised some years ago, that the College Council fears that the Members will introduce

discussions on matters of socio-political interest which will disturb the lethargic calm in which that body is at present enwrapped. As to this, I will only say that nothing of the kind is to be expected. We do, however, claim that the College has another function which it persistently keeps in the background—viz., to look after the interests of its Fellows and Members. It does not even pretend to do this, and the presence of Members on the Council might induce an awakening to its duties in this respect. It had an opportunity of doing this in connexion with the Insurance Act, but instead it only (in conjunction with other bodies) called a meeting of the staffs of London hospitals.

The statement that it is impossible to poll 17,000 Members can only be characterised as preposterous. It has been done already several times by the Society of Members, and would be quite easy for the College with its much larger resources. In conclusion, I would only assert that the addition of a few Members would be a source of strength instead of weakness to the Council, and would put an end to an irritating domestic controversy which has existed at the College for over a quarter of a century.

I am, Sir, yours faithfully,

Portishead, Nov. 25th, 1912. W. G. DICKINSON.

CAN ANGLO-SAXONS COLONISE THE TROPICS?

To the Editor of THE LANCET.

SIR,—I should be very much obliged if any of your readers who are familiar with the tropics would give me their opinion as to whether there is any hope of the successful and permanent settlement of British-born or descended people in regions between Cancer and Capricorn. At the present time the subject of the colonisation of the Northern Territory of Australia has come into the realm of practical politics, and there are many in the Commonwealth, including those in authority, who insist that only Anglo-Saxons, or failing them, Northern Europeans, such as Danes and Swedes, should be encouraged to go and settle there. I have very grave doubts whether a population, which will have to work hard in the open throughout the year, can be drawn from the Anglo-Saxon race, especially as the wives and children of the workers will have to remain continuously in the tropics. I should be glad, however, to know from those who have had experience of such places as the West Indies, British Guiana, Mauritius, Ceylon, and India, where will probably be found persons of pure British or Northern European descent, whose forefathers have resided for several generations in the tropics, what is the physical, mental, and moral condition of such people. Have they retained all the virility and capacity for work of their ancestors, or do they show signs of deterioration? How do the women and children compare with those who have been born and bred in the British Isles? I am convinced that the Commonwealth Government is attempting a costly and disastrous experiment in seeking to transplant people from the temperate regions to the tropics, and in rejecting the opportunity of obtaining a large number of desirable colonists from Malta, which is a sub-tropical country, and whose inhabitants, therefore, would be much better adapted for settlement on the hot river flats of Northern Australia than any blond Northern European could possibly be. Thanking my informants in anticipation,

I am, Sir, yours faithfully,

RICHARD ARTHUR, M.D. Edin.

Parliament House, Sydney, Oct. 7th, 1912.

CEREBRAL ANGIOSPASM.

To the Editor of THE LANCET.

SIR,—I beg to thank Sir William Osler for the reference on this subject which he gave in last week's LANCET. In view of this reference the sentence in my lecture ought to read "How little this communication of Dr. Peabody influenced medical teaching or thinking is shown by the absence of any reference to this condition in Sir William Osler's excellent and popular book on the 'Principles and Practice of Medicine' [in the section devoted to diseases of the nervous system: it is only referred to in the pages dealing with arterio-sclerosis, where it is practically set aside as unsatisfactory]."[1] It had not occurred to me to extend my search beyond the nervous system. I knew that Sir William Osler taught in his book Thoma's views regarding arterio-sclerosis, but as I regard these views as incorrect, I had not again consulted this section. I presume we may now regard Sir William Osler as a convert to Dr. Peabody's suggestion, and his support is a great gain to a good cause.

I am, Sir, yours faithfully,

Edinburgh, Nov. 24th, 1912. WILLIAM RUSSELL.

[1] The part within brackets is added.

A PROPOSED NEW TREATMENT FOR HUMAN TRYPANOSOMIASIS.

To the Editor of THE LANCET.

SIR,—At the meeting of the British Medical Association in 1895 the late Sir William Roberts read a paper on Anarcotine, a Neglected Alkaloid of Opium, in which he referred to the fact that this alkaloid had in times past been used in India with success in the treatment of malaria. The occasion on which this occurred was brought about because of a scarcity of quinine. Among other interesting statements made by Sir William Roberts is one to the effect that there seems to be valid evidence that in anarcotine we possess a second antiperiodic of great power analogous to, but not identical with, quinine. He also quotes the testimony of two medical practitioners who had used anarcotine extensively, and considered it of signal use in the treatment of malaria.

The intention of this note, however, is not to suggest the use of this drug in malaria, although it might be worth while to resort to it in those comparatively few cases in which quinine seems to be the cause of unpleasant or undesirable symptoms owing to the idiosyncrasy of the patient. But there is yet another disease caused by an organism belonging to the protozoa, and therefore closely allied to the organism which is the cause of malaria—viz., sleeping sickness—for which an efficient method of treatment is required, and I would suggest that anarcotine be tried for this form of typanosomiasis. Although unable to say that anarcotine is of use in the treatment of sleeping sickness, I think I can say that it is not harmful. My experience of its use in this connexion has been too limited to enable me to make anything like a definite statement regarding its capacity for good. It is only to suggest a trial of this treatment in a disease for which, I understand, there is not any quite satisfactory treatment so far. The drug may be administered in the form of a pill, and given in a dose of 1, 2, or 3 grains two or three times a day.

I am, Sir, yours faithfully,

St. James's-street, S.W., Nov. 20th, 1912. J. T. C. JOHNSON.

THE RESPIRATORY NEUROSES.

To the Editor of THE LANCET.

SIR,—May I be allowed to comment on some of the points raised by Dr. Samuel West in his interesting and suggestive paper on the above subject in THE LANCET of Nov. 16th (p. 1352)? Dr. West accepts the bronchial constriction theory of the mechanism of asthma, yet most of the clinical facts he adduces go to support the rival view—namely, the vaso-motor theory, to which he does not even allude. For example, he recalls the fact, first, I believe, pointed out by Sir Thomas Watson,[1] that the onset of phthisis may put an end permanently to asthma. But this is not due, as might perhaps be inferred, to phthisis being "an organic disease of the lungs," but to the fact that phthisis is a chronic pyrexia associated with peripheral vaso-dilation and consequent low general blood pressure. In proof whereof it need only be mentioned that asthma is prone to cease during any pyrexia (pneumonia,[2] typhoid,[3] septicæmia,[3] &c.), always excluding those stages in which there is cutaneous vaso-constriction; here, as might be anticipated, the tendency to asthma is actually increased.[4] Not only, however, is asthma thus inhibited, but so, too, are many of the other neuroses claimed by Dr. West as closely associated etiologically with asthma—e.g., migraine and epilepsy[5]; to these I may add angina pectoris, at least the vaso-motor variety.[6]

[1] Principles and Practice of Physic, fourth edition, vol. ii., p. 360.
[2] Trousseau: Clinical Medicine, New Sydenham Society, vol. i., p. 625.
[3] F. Hare: The Food Factor in Disease, 1905, vol. i., p. 247.
[4] Morahead: Clinical Researches on Disease in India, 1860, p. 56.
[5] Bourneville and Bonnais, quoted by H. A. Hare in Epilepsy, 1890, p. 222.
[6] F. Hare: The Food Factor in Disease, vol. i., p. 250.

Again, Dr. West refers to Hyde Salter's case in which asthma and epilepsy alternated. The same alternation occurs in migraine and epilepsy,[7] in epilepsy and angina pectoris,[8] in asthma and migraine,[9] and in asthma and angina,[10] not to mention many other pairs of neurosal affections, less well known and less understood. And many such alternating neuroses may be led up to by similar or even identical auræ. None of these observations can be correlated and explained except on the view that all such clinically diverse neuroses are manifestations of disordered vaso-motor action; on this view they present no difficulty whatever.

Now the vaso-motor theories of migraine, asthma, angina pectoris, and epilepsy, major and minor, are all already accepted by physicians whose scientific position none can question. But unfortunately for the sake of correct generalisation, all are not accepted by the same physicians. And for this there can be no doubt that extreme specialisation, necessary as it is, is almost solely to blame. I will refer to a few names.

Sir William Osler regards asthma as "a neurotic affection characterised by hyperæmia and turgescence of the mucosa of the smaller bronchial tubes."[11] Sir Lauder Brunton demonstrated that peripheral vaso-constriction is essential to the paroxysm of angina pectoris. Sir William Gowers, long an opponent of vaso-motor theories as regards both migraine and epilepsy, has recently seen reason to modify his views, at least, as regards migraine,[12] while the vaso-motor theory of epilepsy has gained a most valuable supporter in Dr. A. E. Russell.[13] Considered separately the arguments in favour of a vaso-motor mechanism in each of the four neuroses seem sufficiently cogent; considered collectively they gain, at any rate, a hundredfold in power.

Let the above four physicians be imagined to form a commission to sit on this question, having before them all the clinical evidence. This is already in existence, and needs but collecting and arranging. I feel confident they could arrive at but one conclusion as regards the mechanism of the four paroxysmal neuroses. This I will attempt to outline.

Primarily there is a more or less widespread peripheral vaso-constriction common to all. This affects most frequently, or at any rate most obviously, the cutaneous area. As a result there is a tendency to a rise in the general or aortic blood pressure. This tendency is met, and more or less compensated—i.e., inhibited—in different ways, varying with the neurosis. In migraine there is a compulsory vaso-dilation localised in the head—scalp, pericranium, or membranes of the brain—any or all of these. Such localised vaso-dilation of necessity gives rise in the circumstances (the blood stream being largely shut off from other wide areas) to an intense vascular distension (arterial hyperæmia), which is the cause of the intense throbbing headache. In asthma the compensating vaso-dilation affects the bronchial arteries. The resulting vascular distension causes turgescence of the bronchiolar mucosa with obstruction to respiration in the smaller tubes. In epilepsy there are two varieties of mechanism. In one the peripheral vaso-constriction extends to the cerebral arterioles and so causes sufficient cerebral anæmia, local or general, to induce convulsions, local or general. In the other, the peripheral vaso-constriction, being widespread and rapid, causes so sudden a rise in general blood pressure that vagus inhibition of the heart-beat, partial or complete, occurs, and is responsible for the sudden cerebral anæmia, unconsciousness, and general convulsions. In angina pectoris there is a failure of compensation; the peripheral vaso-constriction is uncompensated, or at least inadequately compensated. Hence a sudden and actual rise in the aortic blood pressure. Distension of the aorta will explain the anginal pain in the breast, which will, of course, be greatly intensified if aortitis be present. But distension of the aorta involves distension of the coronaries and of the tissues, including the aortic and coronary plexuses, which they supply. The communications of these plexuses with the brachial, &c., would explain the referred pains in the arm and elsewhere.

[7] Gowers: Prodromas of Migraine, Brit. Med. Jour., June 12th, 1909, p. 1400, et seq.
[8] Rowe: Journal of Mental Sciences, January, 1905.
[9] Liveing: Migraine and Sick-headache, 1873, p. 212.
[10] Ibid., p. 200.
[11] Principles and Practice of Medicine, 1894, p. 499.
[12] Prodromas of Migraine, Brit. Med. Jour., June 12th, 1909, p. 1400, et seq.
[13] Pathology of Epilepsy, Transactions of the Royal Society of Medicine, Medical Section, Nov. 26th, 1907; also Gulstonian Lectures.

I believe I am correct in saying that there is no single clinical observation on any of the four neuroses which can be shown to be inconsistent with the vaso-motor theory above stated.

I am, Sir, yours faithfully,

Beckenham, Nov. 16th, 1912. FRANCIS HARE.

To the Editor of THE LANCET.

SIR,—I was greatly interested in reading Dr. William Russell's lecture on Cerebral Angiospasm in THE LANCET of Nov. 16th (p. 1349), and also Dr. Samuel West's article on Respiratory Neurosis at page 1352 of the same issue. There was one symptom which was not mentioned in either paper to which I may draw attention—viz., yawning. In the *Edinburgh Medical Journal*, May, 1893, I published some cases of Raynaud's disease, and perhaps a brief note on one of them may be of interest after having been buried so long.

A woman, aged 60, complained of giddiness, faintness, some paresis of left leg, and slight aphasia. Not been well for a few days. History: Twelve years ago, when 48, she first became subject to symmetrical dead fingers, which were very painful. Ten years ago epistaxis occurred, and a slight injury to a toe caused profuse bleeding. Attacks of epistaxis frequent, but she was somewhat alcoholic. Never had chilblains. The condition of hands and toes not varied much lately, but often unable to do domestic duties on account of pain in hands after washing.

On examination, Feb. 24th, 1891, three hours after the aforesaid symptoms, she was strange and dazed. No facial or other marked paralysis, but paresis of left arm. Feet colder, hands warmer than rest of body. Pulse regular, 80. No marked increase of tension. Still some aphasia, left-sided headache; breathing quiet and regular. Pupils equal; react normally. Superficial plantar and patellar tendon reflexes exaggerated, specially the former. When taken ill to-day the hands were said to have been almost black, face pale, sight dim. Nails are overgrown, being so tender to cut, and so on. Feb. 25th: Speech almost right; no giddiness, though still left-sided headache. Urine 10 oz., 1025; no blood, no sugar. Albumin doubtful. March 1st: Fingers better, nails able to be pared. Spasmodic cough, 3 to 5 A.M. No headache. March 3rd: Been yawning all day, though cannot sleep. Periodic cough continues. March 6th: Cough ceased, but replaced by watery diarrhœa at same hour. Yawning passed off, having lasted two and a half days.

It was remarked that "these varying symptoms can only be accounted for by corresponding attacks of cerebral anæmia or congestion affecting different areas of the brain, as they are compatible with no single lesion." I once attended a stout lady who had repeated severe attacks of "air hunger," associated with extensive angio-neurotic œdema of the arms.

I have under my care at present an old man, 78, who has recovered from a patch of gangrene of the lung with empyema which I opened freely. Two weeks ago he had a series of eight convulsive seizures in the course of a few hours. Conjugate deviation to the right, marked paresis of the right arm and leg, both of which, however, were at times convulsed. I gave him hypodermic injections of heroin and hyoscine, and next morning he was apparently all right, in his previous condition, which was one of more or less aphasia, &c., the result of a lesion during his previous illness, but he is able to be up and walk about.

Two similar cases in old people have been patients of mine—one an elderly lady who had five or six illnesses, each with a series of convulsive attacks. Such convulsions are evidently due to cerebral anæmia from one cause or another. The New Sydenham Society published in 1859 a monograph by Kussmaul and Jenner on this subject, and on page 104 one of the causes is given thus: "Spasms of the muscles of the blood-vessel," with four sub-divisions.

I am, Sir, yours faithfully,

J. CHRISTIAN SIMPSON, M.D. Edin.

Cambridge, Nov. 19th, 1912.

THE MITIGATION OF STREET NOISES.

To the Editor of THE LANCET.

SIR,—You were good enough last September to grant me space in your columns to invite the support of the profession in approaching the authorities with a view to mitigating street noises. I have now to thank you very much for that favour and to express my gratitude to those medical men

who were kind enough to communicate with me. You and they will, no doubt, be pleased to learn that, following my representation, the authorities have issued an order prescribing the use of silencers for motor cycles after March 31st next, and have informed me that borough and county councils are empowered under Section 23 Municipal Corporation Act, 1882, Section 16 Local Government Act, 1888, and Section 5 London Government Act, 1899, to make by-laws dealing with the other noises complained of.

I am, Sir, yours faithfully,

CHAS. MONK,
Lieutenant-Colonel, I.M.S. (retired).

Burlton Lodge, Station-road, Barnes, S.W., Nov. 25th, 1912.

CATTLE AND HORSES AS TYPHOID CARRIERS.

To the Editor of THE LANCET.

SIR,—Practising as I have been for the last 24 years in South Africa, I have been often struck with the way enteric fever spreads, apparently without any regard for time-honoured principles. I have had experience of several epidemics, and I think it may be useful to put certain ideas of mine on paper, which are the result of observation, and which may explain the apparently erratic behaviour of this disease. Even if the explanation should turn out to be incorrect or inaccurate, it might at any rate lead to further observation on a line which, as far as I am aware, has not been suggested—namely, that cattle, horses, and perhaps other animals may be typhoid carriers.

When I first started practice in Clanwilliam in the early part of 1888 the country was flooded by the heaviest rains that had occurred in the memory of the proverbial oldest inhabitant. Typhoid fever had made a start before the rain, however, had begun, continued more or less during the rainy season, but assumed its greatest severity as the dry weather set in. I was then quite unable to account for its spread and severity, the farms being isolated dwellings often at a considerable distance from one another. Its greatest intensity was along the course of the Oliphants River, but as the river water was not used for drinking or household purposes, and was a large rapidly flowing stream, I did not think the river could be to blame. Drinking water was obtained from mountain springs that ran down and collected into furrows from which all water for household use and irrigation was drawn. The doctrine of typhoid carriers was unknown or known to but few, and the idea of "carrying" by means of cattle had never occurred to me.

The next severe outbreak that I had to deal with was during the concluding stages of the war—that is to say, from January, 1901, until September or October, 1902, when the country was still being largely policed. Then I noticed how typhoid fever occurred constantly in the neighbourhood of remount camps or in places where large numbers of horses had congregated and where manure in large quantities was lying about the ground, and I came to the conclusion that horse-dung probably made an excellent culture medium for the typhoid bacillus, and was carried by flies from place to place.

Within the last few days I was sent by the Divisional Council to investigate an outbreak that had occurred on two farms about 50 miles from Clanwilliam; the farms were about four miles from each other. On the first farm I found two European children suffering from the disease. The owners of the farm were cleanly, intelligent Dutch people, and they used every precaution to prevent the spread of the disease. The second farm, however, was quite different. Not only were the inhabitants uncleanly and careless, but the houses were built on a marsh with water flowing all about them, and it was upon this farm that the disease originated. Here I found in all eight cases in different stages. The water-supply in both cases, as stated before, was from a mountain spring where cattle were in the habit of drinking, and the water, after being contaminated with their fæces, was freely used for household purposes. At the time of the present outbreak there was no enteric fever in the neighbourhood, and the idea struck me that possibly some of the cattle might be carriers, who deposit the bacillus in a suitable medium for its growth, and are thus able to start an outbreak of enteric fever in the neighbourhood.

I remember that during the war the spread of enteric fever could not always be accounted for, and from time to time I have thought that possibly horses, cattle, and other animals, who do not suffer themselves from the disease, might be able to carry it and deposit its bacilli in various places. If this view be correct, it would readily explain the apparently erratic behaviour which characterises so many of the South African epidemics.

I should be glad if you would give publicity to this, if you think it would create discussion, as it is a question of considerable importance to South Africa, where typhoid fever epidemics often assume a very serious character.

I am, Sir, yours faithfully,

ALFRED A. HAYES,
District Surgeon.

Clanwilliam, Cape Province, South Africa.

THE ADVISORY COMMITTEE UNDER THE NATIONAL INSURANCE ACT.

To the Editor of THE LANCET.

SIR,—The numerous letters I have received from members of the medical profession and the announcement of Sir John Collie's resignation make it necessary for me to explain my attitude towards the Advisory Committee of the National Health Insurance Act. I did not respond to the request of the British Medical Association that I should resign for two reasons. The Association had accepted sanatorium benefit, and I was placed on the committee chiefly for the purpose of advising with regard to the regulations of that benefit. Further, I thought it my duty to remain on the committee so long as there appeared to be any hope of the Chancellor of the Exchequer coming to some arrangement which would satisfy the legitimate and reasonable demands of the profession.

In view of the terms of the British Medical Association's resolution of Nov. 20th, which is now before the Chancellor and which does not preclude the possibility of a settlement, I feel it to be my duty to continue to serve on the committee until the Association finds that it is unable to obtain satisfaction for what it authoritatively defines as the reasonable demands of the profession.

I am, Sir, yours faithfully,

ARTHUR LATHAM.

Portland-place, W., Nov. 21st, 1912.

FIRE PROTECTION IN LONDON AND THE LONDON COUNTY COUNCIL.

To the Editor of THE LANCET.

SIR,—The coroner in summing-up at the Kensington fire inquest on Nov. 21st, is reported to have spoken as follows:—

> The calamity made one wonder how many other buildings in London were in the same condition as they were told Messrs. Barkers' premises were; how the many negotiations were going on, and how many buildings were waiting before the necessary alterations were to be made.

I wish to take the earliest opportunity of publicly replying to these questions. There are upwards of 50,000 buildings in the metropolis at the present moment to which the London Building Act Amendment Act of 1905 has not yet been applied. Although this Amendment Act has been in force now for upwards of seven years, the superintending architect of the London County Council, giving evidence before the House of Commons Committee on the London County Council General Powers Bill (1912) in June last, stated that only 2330 buildings had been scheduled for action at that date, and that the Building Act Committee of the London County Council had only considered 1203 of those cases. Of these 1203 cases only 527 had at that date been satisfactorily equipped by the provision of suitable means of escape, and the balance were in what might be termed a state of negotiation.

That so few buildings (527) should have been put in order out of approximately 50,000 cases in the long period of seven years is a matter of the gravest import, but the blame should not in any way be attributed to the superintending architect nor his officers, but specifically to the London County Council in its corporate capacity, which does not give its Building Act department the necessary means, the necessary staff, or the necessary encouragement to carry

out the requirements of the Building Act Amendment Act energetically and promptly. It is not for me to go into the reason why the County Council should apparently have been so adverse to allowing its officers to carry out their obvious duties, but the fact remains that, indirectly, the responsibility for lives lost in such buildings as the Barker establishment must fall on the shoulders of the authorities rather than the building-owners, who, owing to the Council's known apathy, practically consider the Amendment Act of 1905 a dead letter. Thus the short reply to the coroner's question is that quite an enormous number of buildings in the metropolis are in the same condition as the one which was under review at the inquest—that but very few negotiations are going on as to remedying this state of affairs, and that quite 50,000 buildings are waiting for the necessary alterations to be made.

It is to be hoped that the Barker fire will awaken the London County Council to its duties in this particular matter. With the necessary staff and facilities and with the diligence which the County Council occasionally applies to other departments of its work, the outstanding 50,000 buildings should be put in proper order within the next five years.

I am, Sir, yours faithfully,

EDWIN O. SACHS,

British Fire Prevention Committee's Offices,
8, Waterloo-place, Pall Mall, S.W.,
Nov. 25th, 1912.

A CORRECTION.

To the Editor of THE LANCET.

SIR,—In my article in THE LANCET of Nov. 23rd, p. 1420, the footnote to Table I., "While the rates prevailed the patient was sitting," should read, "While these rates were observed, the patient was sitting."

I am, Sir, yours faithfully,

Queen Anne-street, W., Nov. 25th, 1912. THOMAS LEWIS.

THE MEDICAL PROFESSION AND THE NATIONAL INSURANCE ACT.

To the Editor of THE LANCET.

SIR,—Some of my professional brethren have communicated with me regarding the statement made by the chairman of the Scottish Insurance Commissioners to the effect that sufficient doctors would be found in Scotland to work the Act whether approaching negotiations were successful or not, and have asked what basis there is for the statement. As the question has been widely asked, I should be obliged if you can favour me with space to deal with it.

In the first place, it is to be noted that the chairman's statement was so guarded that it might have been left unsaid had there been no desire on the speaker's part to influence the more timid amongst the doctors. The accuracy of his forecast was conditional on his information being reliable, and he is not confident on that point. His information, such as it is, can have come only from persons who have been regarded by the profession as disloyal. With them the wish is probably father to the thought. Apart, however, from the character of the chairman's channels of information, there is his opinion that the number will be "sufficient." This is a very vague assertion, for what might be regarded as "sufficient" by the chairman might not be so regarded by the general public who are entitled to receive medical benefit under the Act and to have a reasonable choice of doctor.

But the question can be reduced to figures. There are, roughly, 4000 doctors in Scotland, which gives 1 doctor to about every 1200 of the entire population. In the same proportion the 1,500,000 insured persons will require 1250 doctors. It may be that 1250 Scottish doctors will break away from their solemn pledges because they think they are to get 7*s.* per head for every insured person put on their visiting list by the Local Insurance Committee. I still, however, hold to a higher estimate of my brethren, and when it is realised that the 7*s.* is a myth, even those who are most desirous to accept the Chancellor's terms may reconsider their position. I certainly have no information that would lead me to believe that a third of the doctors in Scotland are prepared to accept the Regulations recently issued because an additional 2*s.* has been promised by the Treasury on conditions, one of which is that the Commissioners are to see that proper time and attention are given by the doctor to the insured persons. Think of the Commissioners as having the determining voice in such arrangements for Scotland! As for the Treasury grant, it is not in the Act; it would have to be budgeted for annually, and a vote in the Commons would annul it any year, and the extra 2*s.* would disappear.

If our brethren in populous and poor localities are really led away by the promise of 7*s.*, they must be a source of increasing amazement to the astute Chancellor, and of despair to many of their own best friends. To begin with, the 6*d.* from the sanatorium benefit money may be regarded as already gone, for the Local Insurance Committees are up in arms about it, and the chairman of the Commission seems to have accepted the view that Mr. Lloyd George's words were merely a suggestion. This brings the sum down to 6*s.* 6*d.* This 6*s.* 6*d.* is available for paying the doctors for medical attendance, for night and emergency calls, for setting fractures, reducing dislocations, administering anæsthetics and many other services, and for mileage. The Chancellor never suggested that the doctors in populous centres, with thousands of insured persons within half a mile, were to get 6*s.* 6*d.* per head; he, indeed, definitely indicated that the distribution of the available money was a difficult matter.

With regard to distribution and leaving out of account other extras, take mileage alone—for the country doctor cannot look at any proposal which does not allow for mileage—there are, roughly, 3000 country doctors in Scotland, for even excluding Edinburgh, Glasgow, Dundee, and Aberdeen, every town doctor has a fringe of country practice. If 1*s.* only is taken off for mileage from the 6*s.* 6*d.* it will only allow on an average £25 per annum to each country doctor for travelling expenses. This sum, which is quite inadequate, reduces the capitation allowance to 5*s.* 6*d.* Further, is the country doctor to get no special payment for a night visit 10 miles away, and to be treated as the Dundee doctor, let us say, who pays a night visit in the next street?

When the question of distribution arises the doctors in populous places will find that the additional 2*s.* has disappeared, and the 6*s.* 6*d.* come down to 4*s.* 6*d.*, which they have already declared to be insufficient. I refer only to this aspect of the present struggle, as it was the extra 2*s.* which seems to have reopened the closed book. The chain has been regilded, the hook has had an extra worm put on it. Surely the medical profession in Scotland will see that the bait is not even a real worm, but a phantom. The deeper and truer reason of the opposition by the doctors to the medical aspects of the Insurance Act has its foundation in the conviction that the Act means the degradation and servitude of a section of the profession.

I am, Sir, yours faithfully,

WILLIAM RUSSELL, M.D.,
Chairman, Scottish Medical Insurance Council.

Edinburgh, Nov. 25th, 1912.

To the Editor of THE LANCET.

SIR,—In your issue of to-day in the leading article you say: "The main difference between the present situation and that arising out of any previous negotiations with the Government is that the approval of any terms that are ultimately arrived at will now be left to the Divisions of the Association, the constitution of the Association appearing to provide, though by somewhat complicated procedure, for this contingency." In my opinion the constitution of the Association does not permit of this, and legal advice will have to be taken thereon. Under the articles of the Association, although the general control and policy of the Association is undoubtedly in the hands of the Divisions, their authority can only be exercised through the Representative Body, except in the case of a Referendum, which is only instituted for special purposes. I raised the point at the recent meeting, and was informed by the chairman that the resolution in question was not a Referendum but a precedent. If precedents can be made in contravention of articles of the Association, what is the value of the said articles? If the will of the Association is properly taken in strict accordance with the regulations laid down for that purpose, no doubt a loyal obedience should be given by the minority of the Divisions. But it can

hardly be expected in the event of precedents being adopted which annul for a special purpose the old order. In the event of little further being granted by the Chancellor of the Exchequer to the profession there is sure to be a considerable difference of opinion in the Divisions as to working the Act, and it is very necessary to take care that everything is done with the strictest legality.

I am, Sir, yours faithfully,

Hackney-road, N.E., Nov. 23rd, 1912. MAJOR GREENWOOD.

To the Editor of THE LANCET

SIR,—At the recent Representative Meeting that body decided to delegate to accumulated voting at prospective Division meetings the decision of the policy of the Association as regards any amended offer likely to be obtained from the Government. It is said that this constitutes a new precedent in the administration of the Association which is justified by the present crisis in its affairs and the limited time available before an attempt can be made by the Government to put the medical benefits under the Act into force.

Apart from the arguable question as to whether this limited time has arisen in consequence of the action of the Association or not, and whether, therefore, it is a subject of much moment in view of the far-reaching effect to medicine of any bargain hastily entered into, I trust you will permit a full discussion on the new precedent about to be adopted in its relation to the present so-called crisis in the affairs of the Association. The points that would seem to arise for immediate consideration are these: (1) The action of the chairman of the Representative Meeting in accepting the proposal as one that was constitutionally in order; (2) the position of those who have signed the undertaking issued by the Association and resigned their appointments; (3) the position of the negotiators; and (4) the likely consequences to the prestige and stability of the Association.

It can be accepted as a truism by all who know him that any discussion of the action of the chairman outside that meeting will not meet with his disapproval, but rather be of interest. The policy of the Association is arrived at in a manner strictly guarded and controlled by the Articles and By-laws, as also by the Standing Orders of the Representative Meeting. It can be stated shortly that apparently the only legal way by which that policy can be arrived at is by free discussion of the subject in meetings of Divisions; by discussion and resolution at the Representative Meeting subsequently; by passing any resolution affecting policy by a two-thirds majority; by its confirmation within three months either at a meeting of the Council, or through lapse of time, or by a Referendum organised and conducted by the Council after it has decided that the resolution does not properly represent the wishes of the Association.

In view of this elaborate constitutional procedure it is not easily apparent how the chairman allowed the novel procedure outlined in the resolution of the Representative Meeting to be in order, as a means by which to voice the wishes of the Association and define its policy, seeing that his position as moderator of that assembly requires him not only to conduct the meeting so as to allow an opportunity for all views to be expressed, but also to protect the rights and interests of all the members as they are defined in the Memorandum, Regulations, and Standing Orders. Questions of expediency, limit of time, and such like, are not ones that a constitutional ruler can for a moment admit.

Then, with regard to those who signed the undertaking by which they have pledged themselves not to accept any medical service under the Act, except that which is in accordance with "the declared policy of the Association." Many have resigned valuable appointments "in support of the policy of the Association." The delegation by itself of the right of the Representative Body to decide that policy to those attending some 180 or more Division meetings—from attending which quite 50 per cent. of the rural members are debarred either by distance or other peculiar causes—is not provided for in the constitution of the Association, however desirable that it should be; nor is any provision made for a postal vote. The Divisions in the colonies and dominions beyond the seas will also have to be consulted if the resolution is strictly interpreted as it should be.

Knowing, as all do who have during the past 18 months been engaged in uniting the profession, that there are a large number of practitioners whose signatures to the undertaking were only obtained as a result of personal pressure and on the proviso that the policy of the Association would be constitutionally arrived at, it is more than likely that the majority will feel freed from their bond on the slightest hint that the policy of the Association is not to be amended as provided for in its regulations, but by other means. Lucrative posts resigned on a definite understanding will be sought after once more when it is seen that the organisation of the Association in ethical matters can only be effectively used when and if its decisions have been arrived at in the way provided in its regulations. To take proceedings against a practitioner for disobeying a decision come to in a contrary way would result in an appeal to a court of law, where the Association, and not the practitioner, might be found to be the offending body. The whole machinery of the Association's ethical procedure would be found to be inoperative.

Then as to the five negotiators. Before a satisfactory result can be expected from any conference with the Government it should be possible to show that means exist and will be used by which to obtain the loyal acceptance of the decision of the majority of members. No such means exist outside the Association's constitution. There can be no binding force in the decision of one Division, or even of several Divisions, over the decision of another if not confirmed as provided for in the regulations. Each Division at once becomes a law unto itself. In view of the very marked difference of opinion shown to exist at the last meeting on crucial points of policy the only means provided for getting the profession into line is a Representative Meeting. Suppose dispensing by doctors is absolutely refused where a chemist can be found, and knowing the views held on the subject, what power would the Council have to obtain union did it announce that the profession must refuse to work the Act because 96 out of 190 Divisions stand out for dispensing and that they include 9820 members to 9780. If, on the other hand, the Council said work the Act, what, then, would the 96 Divisions say? Under the procedure outlined by the resolutions of the Representative Meeting no provision is made for voicing any counter offer, much less for obtaining it, however willing the Government and the Commissioners might be to accede to it. The offer with all its intricacies will have to be accepted or declined as it stands.

The action proposed will form a precedent for unconstitutional action in the future; the steadying influence of a possibly cumbersome procedure will be lost; waves of feeling sweeping over the profession will be voiced in a similar manner and in a hurry as the policy of the Association; statements in plain and unmistakeable language will be considered by the laity to be plain and unmistakeable bluff; those who have slowly and laboriously obtained for the profession the position now held by the Association will retire disheartened; instead of one democratic government there will be governments by mobs. If it is a question of expense that influenced the Representative Body to adopt this resolution, is it a misstatement to say that not one Division would fail to find the money to pay the rail and all other expenses of its representative if asked to do so at this crisis? Now is not the time to risk wrecking the ship just for the sake of saving the expense of a little fuel. It is to be hoped that when the Council meets to consider the decision of the Representative Meeting it will decide to call the Representative Body together once more in order to consider the new problems in a constitutional manner; or if it comes to a decision in a contrary sense that at least seven Divisions will be found willing to use their powers under By-law 36 (1) to requisition the Council to call such a meeting. A few weeks' delay cannot be weighed in the balance as against the institution of a medical service that may be at its inception anything but an insurance against loss of health and for the prevention and cure of sickness amongst the industrial classes.

I am, Sir, yours faithfully,

Brighton, Nov. 25th, 1912. E. ROWLAND FOTHERGILL.

ON Nov. 26th an informal meeting of the members of the honorary staffs of the London chest hospitals was held. After discussion a committee was appointed, consisting of two members from each hospital staff, to draw up a scheme for the uniform treatment of pulmonary tuberculosis in London.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Romsley Sanatorium.

IT was expected that the sanatorium which is being erected by the Hospital Saturday Fund as a memorial to Sir William Cook would be ready to receive patients this autumn, but there has been considerable delay in the work owing to the effects of industrial strikes and the great difficulty of hauling material up the steep hill upon which the building is being erected. Now that funds are available under the Insurance Act it has also been decided to complete the whole of the scheme, and it does not appear possible that patients can be admitted before next spring.

Tuberculosis Exhibitions.

The social service committee of the adult school movement is arranging for three-day exhibitions to be held in several of the poorer quarters of the city. It was felt that the large exhibition held in July in the town-hall did not succeed in attracting the very poor. The National Association for the Prevention of Consumption is lending the contents of one of its caravans, and several exhibits will be obtained locally. Lectures on consumption, town planning, housing, &c., will be given during the evenings.

Nov. 26th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Medical Treatment of School Children.—The Epidemic of Measles in the City.—Hospitals and Post Sanitary Committee.

As a result of the recent conference between the President of the Board of Education and representatives of the Liverpool education committee, the Board has approved of the proposals of the education committee for the medical treatment of school children. Presumably the matter will now go forward without delay, and it is hoped that facilities for dealing with defective vision and other affections of juveniles will be provided at an early date.—The prevalent epidemic of measles in the city shows no signs of abatement. In accordance with the suggestion of the medical officer of health, a large number of infant schools remain closed. Certain schools at the south end of the city will be closed for three weeks. The authorities are relaxing no efforts to check the spread of the outbreak, and they earnestly invite the coöperation of parents.—On his re-election last week as chairman of the hospitals and port sanitary committee Mr. John Utting referred to the fresh responsibilities imposed upon the committee under the Insurance Act in the treatment of tuberculosis, and expressed the hope that the committee would not incur any capital expenditure until the Government stated clearly the course it intended to pursue.

Appointment for Dr. R. Stenhouse Williams.

After a considerable number of years of work at Ashton Hall and the University, first as assistant lecturer and later as lecturer in public health and bacteriology, Dr. R. Stenhouse Williams is about to sever his connexion with the University of Liverpool on appointment to a position under the Board of Agriculture, with headquarters at University College, Reading. Dr. Williams has accomplished much valuable work while in Liverpool. He is an old student of University College, Liverpool, and one who has always taken a deep interest in the success of students committed to his care. His departure from Liverpool is much regretted.

Nov. 26th.

WALES.

(FROM OUR OWN CORRESPONDENT.)

Sanatorium Treatment in Monmouthshire.

UNTIL a permanent hospital for tuberculous cases is erected in Monmouthshire it has been decided to utilise an existing institution at Bassaleg, near Newport, where there is accommodation for about 35 patients. The sanatorium committees of the county have also arranged for the use of the isolation hospitals belonging to the Blaina and Nantyglo and the Abersychan urban district councils. Dispensaries or visiting stations are to be provided at Abergavenny, Blaenavon, Chepstow, Monmouth, and Pontypool in the eastern portion of the county, and at Abertillery, Blaina, Ebbw Vale, Maesycymmer, Newbridge, Rhymney, Risca, and Tredegar in the western portion.

Cardiff Hostel for Women.

After a considerable amount of adverse criticism and of opposition the Cardiff corporation decided last year to establish a hostel for women, and it was opened just about a year ago. It was intended that it should provide accommodation for servants out of a situation and other working girls and women. In the first instance ten beds were provided, and for several months these seemed to be more than enough as the average number of lodgers daily was only five. Those who had criticised the scheme appeared to be justified in the position they had taken up, and there seemed a probability of the corporation abandoning the enterprise as entailing too great a charge upon public funds. A few months ago, however, steps were taken to advertise the hostel, and at once it was taken advantage of by a larger number of girls and women, of whom over 500 have been accommodated in the past six weeks, and on several occasions admission has had to be refused owing to lack of accommodation.

Western Valleys (Monmouthshire) Water-supply.

The four urban districts of Abertillery, Abercarn, Mynyddislwyn, and Risca, in Monmouthshire, have a combined population of about 80,000 persons, or nearly double that of 20 years ago. A joint sewerage scheme for these districts is now in course of completion, and the work connected with a combined water-supply has been begun. There is at present in the district to be served storage for about 40,000,000 gallons, but owing to subsidences due to mining operations even this storage is not to be relied on. In these circumstances it is not surprising to find that in some parts of the districts concerned there was a serious shortage of water during the summer months of recent years. The new water undertaking includes the construction of a dam, 974 feet long, across the Grwyne Fawr Valley in the south-eastern corner of Brecknockshire, thus enclosing a reservoir with a capacity of 376,000,000 gallons. The reservoir, which it is said will be the highest in the country, will be at a height of 1750 feet above sea level. Mains are to be laid a distance of 28 miles to the upper portion of the districts, where a service reservoir will be constructed. The total cost of the undertaking is £260,000.

Barry Municipal Hospital.

The Barry urban district council was the first local authority in this country to establish a rate-aided hospital. Medical attendance is provided by the general practitioners in the town, who act upon a rota. The sum of £400 a year is divided between those who elect to go on the rota. At the present time there are eight practitioners on the staff. For some time past the question of employing a whole-time resident surgeon has been under discussion, and it has been suggested that such an officer should have entire charge of the hospital to the partial exclusion of the local practitioners, who were, however, averse to such a course being taken, although it was admitted that it would be a great advantage to have a surgeon on the spot who could attend to emergency calls. It has now been decided to appoint a junior house surgeon, so that the existing arrangements will hardly be interfered with, while at the same time there will be a resident surgeon.

Nov. 26th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh Anti-tuberculosis Scheme.

AN important advancement in the development of this movement took place on Nov. 23rd with the opening of new dispensary buildings, the ceremony being performed by Lord Dunedin, and Sir Malcolm Morris taking part in the proceedings. It has long been felt that the present accommodation in Lauriston-place was quite inadequate, and therefore premises were taken in Lady Lawson-street, which is very central to the districts from which a great proportion of the patients are drawn. At an estimated cost of

over £8000 this building has been remodelled into what may be called a typical example of what a central clearing house, such as this dispensary represents, should be. Fortunately the outside walls required but little readjustment, and therefore set free more funds for the interior arrangements. These buildings include an educational and an administrative department. The former includes a large lecture room, which is fitted up so that it may be used for lantern or cinematograph demonstrations, and also a pathological museum, there being ample cloak-room accommodation provided, as this is intended largely for education of the public. On the administrative side the patients' entrance opens through an office, where the current case forms may be stored, into a large, well-ventilated waiting hall, round which a series of consulting rooms, dressing rooms, lavatories, &c., are arranged, those for new cases on the one side, old patients on the other. There is a special waiting room, with a separate entrance as well as that off the main waiting hall, in connexion with the drug dispensary, which is situated close to the main patients' entrance, thus it being possible to avoid congestion being caused by patients coming up to get their prescriptions made up alone. In the gallery running round the main waiting hall there are research laboratories, an X ray room, a library, and a sitting room for the nurses. The remainder of this floor is taken up by the caretaker's house, which has a separate entry from near the main entrance; this official is the only resident on the premises. In the evening a cinematograph demonstration was held, under the chairmanship of Sir Malcolm Morris, illustrating the methods of the Edinburgh anti-tuberculosis scheme in its various departments—viz., the central depôt or clearing house, the dispensary, the sanatorium for early cases at the Victoria Hospital, the hospital for advanced cases at Colinton Mains, and the farm colony at Loanhead. The methods of conducting the visitant work on patients and contact cases in their own homes were also shown.

Open-air School under Glasgow School Board.

The chief medical officer of the Glasgow school board has recently pointed out that in the "cripple schools" under the board 60 per cent. of the children suffered from rickets, 18 per cent. were affected by tuberculous disease in one or other of its forms, and the remaining 22 per cent. consisted of children suffering from heart disease, nervous affections, and a few cases of defective speech, ear disease, &c. For such children an open-air school similar to that for which plans have been recently passed by the Glasgow board, will be very helpful. The chief objection to an open-air school in Scotland is the climate, but it is believed that children spending at least some months in such a school would gain greatly in health and vigour. In April of this year 20 children selected chiefly from the invalid classes, were sent to a hospital home at Prestwick, on the Ayrshire coast. Most of these were tuberculous children, and improvement occurred in every case, and in some was very marked. While the curriculum was the same as that followed in the invalid schools in the city, the health of the child was considered of the greatest importance. Although a day school in close proximity to the city, and where the children could travel daily, would be a great advantage, yet a residential open-air school would be more beneficial. It could be placed much farther from the city, and the children would be in suitable surroundings by day and night instead of only for a few hours on five days of the week.

Aberdeen School Board: Medical Officer's Third Annual Report.

Dr. George Rose, medical officer to the Aberdeen school board, has issued his third annual report. Out of 32,447 children attending 39 schools there were during the year 13,162 children subjected to routine and 20,250 to non-routine examination. There was an increase of 3000 routine examinations from making the examination of children in their thirteenth and fourteenth year, i.e., in the first instead of the last term of their last year at school, and from examining children of between 7 and 8 years instead of "juniors." As the ages of "juniors" varied from 6 to 11 years there was difficulty in keeping sight of those who had been examined. By fixing an age period for examination it was possible to know when a child entered a school from another school whether or not it had been examined. To ensure that no child was overlooked the dates of examination were now entered in the class register. With regard to infectious diseases, measles, of which there was a severe epidemic during the last three months of 1911, with a high death-rate in very young children, showed a high degree of infectivity. One boy was known to pass on his complaint to 57 others, all the unprotected pupils in his class. Scarlet fever has become endemic, and the percentage of those who have been affected continues to increase. The disease remains of a mild type, but the slightness of the symptoms makes recognition of the disease all the more difficult. The percentage of unsatisfactory footwear decreases, but Dr. Rose thinks that if the boots supplied to necessitous children were made according to natural lines the object lesson would be useful, though its acceptability to parents and children would be doubtful. Clothing has improved in quantity and cleanliness, not altogether, however, without relation to medical inspection. In one school 90 per cent. of those aged 13 to 14 years examined wore brand-new underclothing. Relatively boys are better clad than girls; the material and arrangement of clothing are better in the boys. Dirty heads and ringworm of the scalp have somewhat diminished. Itch, of which, however, there is very little, has not diminished, neither has vermin of the body; but the higher percentage of the latter is more apparent than real. Defective vision is practically the same as last year. Badly lighted schools are found to affect the pupils' vision injuriously. Dr. Rose thinks fine sewing in the infants' department a mistake. If sewing must be taught, it should be taught, on the same principle as reading for infants is given from large type, with large needles and coarse stitches. Defective hearing remains the same, but in a noisy school accurate testing is impossible. The percentage of phthisis remains low. It is noted that while the percentage of congenital deformities is about the same in the three different groups, acquired deformity is far greater in 13–14, Group I.—i.e., the higher the social status of the child the greater the liability to deformity. In the secondary school the strain of home and school work begins to tell on the children in their thirteenth to fourteenth year, and round shoulders, lateral curvature of the spine, and flat chest develop in the rapidly growing youth. In the primary schools, where the strain is less severe, there is less liability to deformity. Those in greatest need of physical training are the advanced pupils of well-to-do secondary schools. That in every case where beading of the ribs was found the child was considered to have suffered from rickets at some period of its life accounts for the large percentage of rickets as compared with other towns. Extreme results of the disease are seldom seen in Aberdeen, but it is significant that such a large percentage should show trace of rickets, the result of improper feeding in infancy. Almost 5·0 per cent. of the girls of 13–14 years had four or five diseased teeth. Through a grant from the Department the board is to make a cautious beginning in treatment by starting a dental clinic. A dentist, half-time, with necessary assistance, is to be employed. With regard to heights and weights, it is found that, if the average height and weight of 13–14 for this year in Aberdeen be compared with the heights and weights of the same age in last year's report, this year the boys are 4·2 and the girls are 5·5 lb. lighter than those of last year. This is explained through the boys being examined at an age three months younger than last year, and the girls at an age five months younger. Dr. Rose remarks that those figures show the fallacy of comparing the heights of children in different districts, though of the same age, without giving the average age at the date of measurement. This annual accumulation of figures is of little value for statistics and worthless for purposes of comparison. Till there is some uniformity of method time spent in taking measurements and working out calculations is time wasted. The board has come to an arrangement with the directors of Linn Moor Home to keep it open during the winter, and children selected by the medical officer, or recommended by medical men or others, go there for an average stay of a month, and return much benefited by their stay. Sixty-three pupils have received treatment for flat chest, stooping, and curvature of the spine. Classes at three centres were held by the physical instructors of the board. The enthusiasm of the teachers for the work deserves praise. There is a waiting list of 40 pupils, and to overtake their treatment three more centres with suitable equipment, which would cost over £25 per centre, are

required. At the close of each course of housewifery at the Middle School one of the nurses has a talk on personal hygiene with the pupils. The teachers speak highly of the value of such talks. The board has resolved that in future all teachers entering its service shall be examined and approved of by the medical officer of the board. At the request of the University Court the board granted the services of the chief medical officer to give instruction in school medical inspection to the graduates attending the public health course. The course will be free.

Extension of Inverurie Hospital.

A discussion has arisen between the Garioch district committee and the Inverurie town council over the proposed extension of the Inverurie joint epidemic hospital. The hospital was built some 15 years ago by the local authorities of the Garioch district and the burghs of Inverurie and Kintore at a cost of £2639. This initial cost and that of maintenance were apportioned among the three authorities on a basis of population; Garioch district, having an estimated population of 16,194, was to pay 75 per cent.; Inverurie, with an estimated population of 4000, was to pay 20 per cent.; and Kintore, with an estimated population of 686, was to pay 5 per cent. For some time past it has been seen that the accommodation at the hospital was inadequate, and plans were prepared providing 16 beds instead of nine as at present. The estimated cost of such extension is £1450, and the Garioch district committee proposes that the cost of extension and future expenditure should be divided as follows: Garioch, 50 per cent.; Inverurie, 45 per cent.; and Kintore, 5 per cent. The district committee bases its figures upon the fact that at present Inverurie provides about 45 per cent. of the patients in the hospital. The town council of Inverurie, on the other hand, agreed to pay 21 per cent. of the capital expenditure and permanent charges of the hospital, and suggested that each district should pay for the maintenance of its own patients. Both sides are unmoveable, and at the last meeting of the district committee it was proposed that it should apply to the sheriff to rearrange the contributions (this is allowed for in a clause in the original feu), but the motion was defeated, and it was decided to wait "until Inverurie came to a reasonable frame of mind." The district committee maintains that Inverurie is unwilling to bear a fair share of the additional expense, while the town council of Inverurie is of opinion that the proposals of the district committee are distinctly unfair to the burgh.

Nov. 26th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Women's National Health Association and Midwives.

THE energy of the Women's National Health Association sometimes outruns its discretion. Its latest activity is in the direction of obtaining the control of almost the entire practice of midwives throughout the country. With this end in view the association has addressed to the various boards of guardians a letter offering, in cases where a board has appointed, or does appoint, as midwife of a dispensary district a woman having qualifications satisfactory to the Insurance Commissioners, to provide extra salary sufficient to bring the midwife's salary up to £1 a week, and provide a bicycle, and allowance for uniform. This offer is, however, only made on certain conditions. All fees earned by the midwife are to be the property of the local committees of the Women's National Health Association. The midwife is to carry on such work among mothers and infants as the local committee may direct during such time as she may not be required for her special duties. So far the circular has had rather a chilling reception. Most of the boards of guardians who have received it have simply marked it "read."

Opening Meetings of Medical Societies.

The two Dublin students' medical societies have held their opening meetings within the past week. At the Dublin University Biological Association Dr. W. Geoffrey Harvey read a paper on the Uses of X rays in Medical Diagnosis, and the paper was discussed by Dr. A. E. Barclay, of Manchester, Professor Joly, F.R.S., Dr. R. Travers Smith, and Dr. J. T. Wigham. At the University College Medical Society Professor B. J. Collingwood gave an account of recent work on the coagulation of the blood, with particular references to researches conducted in his own laboratory. Among those who discussed the paper were Professor W. H. Thompson, Professor E. J. McWeeney, Dr. A. R. Parsons, and Sir William J. Thompson.

Dublin Guardians and Bodies for Dissection.

Some weeks ago the guardians of the North Dublin Union passed a resolution forbidding their officers to permit any bodies to be removed from the union to the schools of anatomy. A similar resolution was proposed last week at the meeting of the South Dublin guardians, but was defeated by a large majority.

The Ulster Medical Society.

The annual dinner of the Ulster Medical Society was held in the Medical Institute, Belfast, on Nov. 21st, the President, Dr. R. W. Leslie, in the chair. There was a large attendance. After the toast of the King had been proposed by the President, Sir W. Whitla presented to the society the badge given to him when he was President of the Belfast meeting of the British Medical Association, to be worn by the President of the Ulster Medical Society, a link being added by each person occupying the chair. Dr. R. J. Johnstone proposed "The Guests," to which Dr. John Campbell (President of the Ulster branch of the British Medical Association), and the Vice-Chancellor of the Queen's University of Belfast replied. The health of the President was proposed by Mr. Robert Campbell, and Dr. Leslie, who was very warmly received, returned thanks. The dinner was most successful and largely attended.

The Administration of Sanatorium Benefit.

The method for providing sanatorium benefit is becoming every week more complicated. For example, on Nov. 20th at a meeting of the County Antrim Insurance Committee their temporary tuberculosis medical adviser, Dr. J. Hamilton Stewart, presented three alternative schemes for administration of sanatorium benefit for next year, but it was ultimately decided to deal with one prepared by the Central Irish Insurance Commissioners and put before the Committee by Dr. Charles Dickson, inspector under the Insurance Act, who was sent specially from Dublin to expound it. He assumed that there were 3800 tuberculosis patients in the county, and for these he proposed to have a central county sanatorium with 40 beds, to cost £50 per bed per annum. Each patient would get a three months' residence, and so in the year 160 patients would be treated in the sanatorium at a cost of £2000 in all. For the remaining 3640 patients Dr. Dickson proposed to lay aside £800 for payment of dispensaries and domiciliary visits, and £200 for drugs. He was requested to furnish the name of any sanatorium which was being worked on these terms, while the item £800 largely for fees to be paid practitioners for domiciliary treatment was naturally objected to. Dr. Dickson replied that this was a rough estimate, as a great deal depended on the attitude of the medical practitioners in the county. As a result a conference was held with a subcommittee of the Executive Medical Committee for county Antrim as to the fixing of a scale of fees which would be approved by the medical profession, who are up in arms against the remuneration proposed in the scheme of the Insurance Commissioners. The proposals of the Irish Insurance Commissioners were, after debate, declined. At a meeting of a subcommittee of the Belfast Insurance Committee and a subcommittee of the Local Medical Committee held in the Medical Institute, Belfast, on Nov. 22nd, a conference took place in regard to providing sanatorium benefit, and, as a result, the Local Medical Committee is to send forward a schedule of fees for the consideration of the Local Insurance Committee. The discussion revealed marked differences of opinion on many matters. Various insurance committees in Ireland having asked on what terms they could have insured consumptives admitted into the Forster Green Sanatorium, Belfast, the governors of that institution have replied, giving the following scale:—£1 5*s.* per week for each patient, with an addition of 5*s.* per week for payment of medical staff; 1 guinea for a consultation, 1 guinea for dental consultation and extraction, 5 guineas for a surgical operation, 5*s.* for an ordinary report as to a patient's condition, and 10*s.* 6*d.* for a detailed report.

Nov. 26th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Treatment of Scoliosis.

Abbott's method, as is well known, consists in the application of a plaster jacket as follows. The child is laid in a hammock with unequal sides, the convexity of the curvature being on the shorter side of the hammock. Fixing the pelvis, the concavity is lengthened by stretching, and the plaster is then applied, pressure being made towards the concave side. After six weeks the plaster is removed and the spinal column is found in a condition of over-correction. For some months a celluloid mould is worn as a precautionary measure and slight gymnastic exercises are used. M. Calvé and M. Lamy showed at the Société de Pédiatrie on Oct. 15th several patients who were undergoing this treatment. M. Ombredanne stated that he made use of this method in his hospital service in grave cases of scoliosis. His orthopædic assistant, Dr. Lance, agreed with him that in Abbott's method two factors were involved: first, Abbott's principle, which consisted in correcting the deformity under strong pressure on the spine. This principle was excellent. Secondly, Abbott's technique, which had already been modified by himself, and which was susceptible to still further improvement.

Retarded Awakening of the Nervous Centres.

When a newly born infant fails to breathe at birth its respiratory centres are aroused by cold affusions to the face, the excitation of which is conveyed to the medulla by the trigeminal nerve. In like manner excitation of the skin or of the nasal mucosa by ether, ammonia, ethyl iodide, or stramonium can overcome various bulbar derangements—cardiac syncope, asthma, slight intoxication, vertigo, and palpitations. Very light cauterisation of the nasal mucosa also may suffice to arouse all the bulbar centres, and to set in action or regulate a large number of retarded functions. Dr. Pierre Bonnier has cited many examples of this in a very interesting work. He relates that a lady *confrère* had recently placed in his care her little girl, 12 days old, who had not yet been able to suck or drink properly, the act of sucking, in consequence of pharyngeal inertia, being incomplete and provoking instant vomiting. This infant, through inanition, had lost half its weight since birth. Moreover, it "crowed" in consequence of inertia of the glottis during inspiration. A light nasal cauterisation caused the disappearance of the vomiting, and suction thereafter proceeded normally, as a result of the re-establishment of functional equilibrium. A second cauterisation a few days later checked the crowing, the medulla regaining coördinating power over its activities. In like manner, the centres governing various internal or external secretions may be aroused. Thus in the nursling the digestive intolerance of certain milks may be seen to disappear. There is hardly any kind of dyspepsia that has not been observed to yield to the treatment.

The Treatment of Cancer by Formol Injections.

On Nov. 20th, before the Société de Chirurgie, M. Morestin presented a communication from M. Estradère on the Treatment of Cancer with Injections of Formol, a method that has been advocated for some time by Laurent, of Brussels. M. Estradère reported seven observations, mostly cancroids of the skin, but without any histological examinations, and couched in a few lines each. The injections were made into the neoplastic tissue, and under their action the cancroids dried up and shrank. The photographs seemed to show that this plan gives favourable results. Notwithstanding these results, M. Morestin did not consider that this method would serve as a treatment for various kinds of cancer. It is well known that cancroids are curable by various measures, such as cauterisation, arsenious acid, &c. Formol, therefore, may act equally well, and indeed be even more active, but it must nevertheless be regarded as merely a palliative. To one objection of M. Routier, who said that the formol treatment appeared to him hardly superior to the old methods (cauterisation, *flèches de Canquoin*, zinc chloride) for destroying the tumour, and added that if formol has no selective action on the cancer there is no reason to constitute a special treatment of it, M. Morestin replied that formol must not be regarded as a mere caustic, for it certainly possessed other actions, antiseptic and aseptic, and its use was entirely justified as an adjuvant to surgical intervention.

Nov. 26th.

UNITED STATES OF AMERICA.

(FROM OUR OWN CORRESPONDENTS.)

The Public Health Movement in America.

IN the United States and in Canada keen interest is now being taken by medical men and laymen alike in all matters appertaining to public health. Mr. Borden has more than once expressed himself in favour of the establishment of a Federal Health Department, while President Taft, as reported in THE LANCET of Oct. 12th, has been even more outspoken on the subject. Mr. Roosevelt, in an article contributed to the *Saturday Evening Post* of Oct. 26th, went further in some respects than either Mr. Borden or Mr. Taft in the advocacy of measures for improving and conserving the health of the working population. Mr. Roosevelt laid down as the programme of his party in both State and nation effective legislation for the prevention of industrial accidents, occupational diseases, overwork, involuntary unemployment; minimum safety and health standards for the various occupations, prohibition of child labour, and so forth. Thinking men and women of all classes are at last realising, as in Great Britain and in Germany, that problems relating to health must be grappled with without delay.

Paranoiacs and Defectives.

The recent attempt on the life of Mr. Roosevelt has once more brought forward the subject of the prevention of such happenings. It seems to be a matter of general agreement among medical men that individuals of inferior mental capacity and of varying degrees of mania are more numerous now than ever before. Recently in this country there has been an outcry with regard to the large number under restraint for mental troubles, and various reasons have been assigned for it. In a letter to the *New York Times*, Oct. 21st, Dr. Lewellys F. Barker, of Johns Hopkins University, stated that a national campaign for mental hygiene—that is, for health of mind—was not only desirable but also really practicable. He pointed out that more than 200,000 people in this country were insane, and that the number was increasing at the rate of three or four for every increase of 1000 in the population. While exact data regarding imbeciles, epileptics, and criminals were lacking, the numbers are known to be very large. Inebriety, prostitution, and pauperism also, though less than in some countries, were great enough to cause national concern. Dr. Barker points to three great fields in which the National Committee for Mental Hygiene, founded in 1909, may advantageously work: First, in supporting and directing original inquiries by experts regarding the problem of mental hygiene; secondly, in educating the nation to use the knowledge already at disposal; and thirdly, in organising agencies by which the campaign is to be carried on, and in coöperating with other associations, national and international, of allied aims.

Hookworm Disease in Alabama.

Reports of the Rockefeller Commission for the Study Hookworm Disease in Alabama state that from Jan. 1st to Sept. 30th, 1912, 8385 cases of the disease were observed in 22 counties of the State. During the first six months of this period 5334 cases were observed, while during the last three months 3551 were noted.

The Sale of Milk in New York.

The City Department of Health has passed recently further resolutions safeguarding the sale of milk. It has been decided that after June 1st, 1913, it will be illegal to sell milk at large from cans except in approved milkshops and in shops in which foodstuffs other than milk are sold in the original packages only. Milk is commonly sold in New York in sealed bottles to minimise the possibility of contamination between the dairy and the consumer.

Lectures in New York.

Owing to the presence in this country of many eminent medical men, most of whom came to attend the meeting of the International Congress on Hygiene and Demography, lectures have been delivered in New York by some of the

foremost European authorities on various branches of medical science. Dr. E. F. Bashford gave the Middleton Goldsmith lecture a week or so ago,[1] taking as his subject Cancer, and created a very favourable impression. Professor Max Rubner, of the University of Berlin, has delivered a series of five lectures on Energy Problems in Nutrition, under the Herter Foundation at the Carnegie Laboratory. Professor G. H. F. Nuttall, Quick professor of biology at the University of Cambridge, lectured before the Harvey Society on Oct. 12th at the New York Academy of Medicine on the Relapsing Fevers. At the New York Post-Graduate Medical School and Hospital on Oct. 14th Professor H. Strauss, of the University of Berlin, lectured on Gastric Secretion from the Therapeutic Point of View, and on Oct. 15th on the Method and Purpose of Dechlorination in Nephritis. On Oct. 29th and the four consecutive days Professor C. von Noorden, of the University of Vienna, gave a series of lectures at the New York Post-Graduate Medical School and Hospital on New Aspects of the Pathology and Treatment of Diabetes, and on Diagnosis and Treatment of Nephritis.

A Clearing House for Defective Children in New York.

The Department of Public Charities of New York city is shortly to open a bureau for the examination and classification of defective children, which may be described as a clearing house. The Departments of Education, Health, Immigration, and Public Charities, as well as children's courts, societies for the safeguarding of children, and dispensaries, may refer children to it for examination as to the nature of their defects, and advice will be given as to the proper course of action in each case.

Nov. 10th.

NOTES FROM SOUTH AFRICA.

(FROM OUR OWN CORRESPONDENT.)

Need for Statistical Information.

DURING the past three years the statistical reports, which for many years were issued annually by the different departments of the several colonies now constituting the Union, have been discontinued, either owing to the breaking up and reorganisation of the departments consequent upon union or owing to the fact that the Government has decided that the expense of publishing such reports, which is roughly trebled owing to the fact that they now have to be produced in both of the official languages, is no longer justified. Be this as it may, one outstanding fact presents itself, and that is that it is impossible for any proper judgment to be come to at the present time as to the general progress, prosperity, and health of the people in South Africa owing to the absence of proper statistical information. No vital statistics relating to the Union as a whole or even of the individual provinces thereof are available. Prior to union a detailed annual record at least of the births and deaths in certain of the provinces was regularly issued. It is true that except during census years these were not of any great value owing to the difficulties of calculating even approximately during the intervening periods the populations of the different areas. These difficulties were caused by immigration and emigration and by the extraordinary fluctuations in the populations of different areas which have always been such a feature of South African life. But during the census years, at any rate, each colony was enabled to take stock, and the medical officers of health were enabled to judge as to the general health of the people based upon fairly accurate data. A census was taken during 1910 of the Union and certain records of populations have been published. The information is, however, incomplete in many respects, but, apart from this, it is valueless because the Government has ceased to publish any records of births and deaths. It is true that the medical officers of health of a few of the municipalities have been supplied with the figures and have been enabled consequently to deal satisfactorily with their own areas, but nothing has been done in connexion with the preparation and publication of vital statistics for the country as a whole, and there is urgent need that this should be taken in hand without further delay. A recent announcement made by General Smuts that the Government has decided to continue the census office as a permanent sub-department of statistics for the Union would show at least that the Government recognises the importance which is now attached to trustworthy statistics in every civilised country and that it does not desire South Africa to lag behind the times any longer in this respect. The new bureau, which will be under the direction of Mr. J. S. Moffat, should, if not crippled for lack of funds, do good work, and it will have this advantage, that it will be able to lay the foundations of a statistical system in a newly unified country, and it is not too late for it to prepare data which will be of immediate value to the worker to-day and which will enable the future student to trace progress, or otherwise, from the very foundation of the Union. The statistical sub-department will carry out the census enumerations at the proper times, as laid down in the Census Act. Thus it will have charge of the quinquennial census of the urban populations which must be held in terms of the South Africa Act, and also of the decennial census which, though it is not prescribed by law, will doubtless be held in unison with the rest of the empire in the future. It is understood that in the intervals the office will apply itself to the preparation of general statistics on agriculture, commerce, finance, industry, labour, and so forth. It is sincerely to be hoped that it may also apply itself to the preparation of vital statistics and that for this purpose an officer of recognised statistical ability may be associated with it. One thing seems clear, moreover, and that is that it will be necessary to seek legislative powers for obtaining adequate data, for the powers conferred by the Census Act would be insufficient to meet all requirements of a general statistical bureau in non-census years.

[1] THE LANCET, Oct. 26th, 1912, p. 1184.

Safety on the Mines.

The Miners' Phthisis Prevention Committee, a body of experts, including representatives of the mining houses, the men, and the Government department, which was called into being some time ago with a view of considering the possibility of reducing the prevalence of that disease, has issued a preliminary report embodying a number of highly important recommendations. The report of the Commission issued early in the year made it clear that the ravages of the disease are not confined to miners engaged only in machine rock-drilling, as had to a large degree been believed, but that everyone working underground is more or less liable to contract it. The committee, therefore, has not dealt merely with the problem of the dust created by rock-drilling and shovelling, but more particularly that connected with the dust raised by blasting. The substance of the committee's report lies in its recommendation that all stopes, drives, and other working places shall be thoroughly saturated with water containing substances specially added for dust allaying before blasting takes place. Other regulations which are suggested deal with rock drilling and other aspects of the danger, and lay it down that more particularly, where the water-supply fails, drilling must cease. It is also recommended that at the exits of the ventilating current from working places sprays be fixed to arrest the dust produced by blasting, and sketches of suitable sprays are furnished. It is further recommended that in all development faces, with certain exceptions, a powerful water blast be applied at blasting times, sprayed by compressed air. It is recommended that no person shall return to the face, when the water blast is in use, in less than 20 minutes after blasting; and where the water blast is not in use return to the face during the same shift shall be considered a contravention of the regulations. It is also recommended that closer attention be paid to the wetting of rock under removal from a mine, and that natives be informed of the dangers from dust and the necessity for preventing it, and that this be translated into the more important native languages and kept posted in the compounds. It is suggested that the penalties for a breach of the regulations be a fine of £5 and endorsement of the miner's certificate for a first offence, and that in the case of a second offence there be prosecution before a magistrate, and the certificate suspended for three months in case of conviction. Special attention is drawn to the detrimental effect of blasting after the first shift on Saturdays, and it is recommended that every effort be made either to abolish entirely the second shift or allow a reasonable interval to elapse between the two shifts, or blast as far as possible at

the end of the second shift only. Full directions are given as to pressure and laying on of water at working places, and special attention is drawn to the responsibilities of shift bosses in the above matters. A thorough wetting of all working places and drilling holes is recommended in the report, and detailed instructions are furnished as to how it should be carried out. Further, it is recommended that every mine manager shall keep proper plans of the water-supply, showing all water pipes, reservoirs, tanks, and sprays drawn to scale. The report is generally a most practical one, and will doubtless be promptly acted upon by the Government.

Report of the Mines Department.

Attention is directed in the report of the Mines Department to the comparatively poor response which has been made to the establishment by the Government of the Miners' Training School, which was opened some time ago on the Wolhuter Mine. Although, of course, every precaution is taken in the school workings to prevent any danger from mine dust, there has never been more than a monthly average of 38 students. This is doubtless due to the phthisis scare, but the Secretary for Mines believes that the youth of the country find little attraction in the calling of a miner. Whatever the reasons may be for the lack of support given to the school, it is most unfortunate that this should be the case, for the Blue-books issued by the department clearly indicate that many of the accidents and risks in mining are due to a shortage of properly trained men. The Government mining engineer states that during the period January to June, 1911, the Rand employed on 53 producing mines an average of 22,180 men, and that during that period there were 17,745 changes, or over 13 per cent. per month. The Secretary for Mines considers that this is enough to explain the very high accident rate on the mines, and he lays it down—as we have done previously in these columns—that one of the first necessities in the prevention of accidents is probably the settlement of miners in attractive homes in the neighbourhood of their mines, and a more steady spirit of work, not only amongst the actual miners, but in the head offices and in the management. An interesting analysis is made in the course of this report of the mine accidents during the period reviewed. Out of 2397 accidents, of which 2358 were in the Transvaal, 2042, or 70·4 per cent., are attributed to danger inherent in the work itself; 275 are adjudged due to the fault of fellow workmen; 552, or 19 per cent., were through carelessness or ignorance of the persons suffering; and nearly 1 per cent. were due to defective plant or material. In connexion with accidents due to falls of ground and use of explosives no less than 30 per cent. were considered to be due to carelessness. In connexion with an otherwise admirable report there are two points which require bringing out. One is that the actual wastage of lives owing to the discharge of sick natives is not properly emphasised, and the other is that the Mines Department is not prepared to admit that its inspectorate is inadequate. In regard to the former point, it is interesting to note that the Tuberculosis Commission now sitting in Johannesburg has been inquiring into the relative mortality on various mines amongst native employees, and, according to the evidence of inspectors of the Department given before the Commission and published in the press, it would seem to have been clearly established that the figures published are wholly misleading and depend upon the practice of the various companies in repatriating their sick employees, or, as one inspector somewhat bluntly put it, it is not only the mortality that actually takes place in a mine area that has to be considered, but also the number that die while or after being repatriated. In regard to the question raised as to the sufficiency of the inspectorate, it was very clearly brought out by the Select Committee on the Miners' Phthisis Bill during the present year that the staff was insufficient, and the Government has since augmented the staff by the appointment of additional inspectors.

Rand Water-supply.

An effort has been made recently to induce the Government to appoint a commission to inquire into the Rand water-supply. The movement is one mainly supported by the Johannesburg municipality, which contends that it has not had fair representation on the Rand water board in view of all the water it takes in comparison with the other municipalities. There are a number of points into which a commission could profitably inquire apart from the question of the constitution of the board, such as the sources of supply at the disposal of the board, and the extent available for mining purposes, how far the mines have conserved their local supplies, and the responsibility for standing charges involved in any new scheme. In any case it seems clear that a considerable augmentation scheme is required, for there are constant complaints all along the Rand owing to the shortness of the supply.

Oct. 2nd.

NOTES FROM INDIA.

(FROM OUR OWN CORRESPONDENTS.)

A School of Tropical Medicine in Calcutta.

FOR the last two years a scheme for the establishment of a School of Tropical Medicine in connexion with the Calcutta Medical College has been under the consideration of the Government of India, which has agreed to give a non-recurring grant of five lakhs towards the construction of the necessary laboratories and research rooms, and to pay a portion of the recurring charges. This scheme has now received the sanction of the Secretary of State, and will be taken in hand at once. The Calcutta University has agreed to the institution of a diploma in tropical medicine, which will be granted after examination to students who have gone through the necessary post-graduate instruction in this school. Facilities will also be given to medical men, whether officials or private practitioners, who may wish to pursue original research in connexion with tropical diseases.

The Calcutta Water-supply.

In connexion with the question of the purity of the Calcutta water-supply Major Leonard Rogers, I.M.S., bacteriological expert to the corporation, reports: The present methods of examination of the Calcutta water-supply are on the right lines, and the only alteration I would suggest is that the total count of intake of water at Pulta and of the town supply from the hydrant be added together with a calculation of the percentage reduction of total bacteria. This will enable the Commissioner to see at a glance the highly beneficial results of the processes of purification through which the water has passed, and will thus be a reassurance regarding the efficiency of the Calcutta waterworks and the excellence of the filtered supply.

Tuberculosis in Bombay.

The September agenda of the Bombay corporation contained the report of the committee appointed to consider the application for financial assistance from secretaries of the King George V. Anti-Tuberculosis League. The committee recommends that a sum of Rs.10,000 per annum be contributed to the working of the League in Bombay city for three years, which does not err on the side of generosity, and defines what is said to be the legal status of the health officer. The attitude of various members of this committee shows how difficult it is for a voluntary worker to try to improve the health of this country. Dr. J. A. Turner is told by the committee what he may, and may not, legally do for the benefit of Bombay, and, according to an eccentric view of the case, the enormous amount of voluntary work that Dr. Turner has done in Bombay—in organising the Bombay Sanitary Association, for example—is illegal. Commenting on this report the leading Bombay newspaper says: "In all countries in the world the anti-tuberculosis movement is speading, and special officers on large salaries have been appointed to help it forward in every county in England. Here the health officer volunteers to do for nothing what is done in other countries by paid officers, but instead of courteously accepting his voluntary services the corporation subjects him to discourteous criticisms and abuse."

The Rangoon Water-supply.

The Rangoon municipal committee has engaged the services of Sir Alexander Binnie as expert to report on the whole question of the water-supply of Rangoon at a fee of 500 guineas.

Cholera.

There has been a sudden and severe outbreak of cholera in Mandalay Town, and some of the victims have been Europeans

and Eurasians. No details are yet known regarding the outbreak of cholera at Mecca, but the disease has attacked Turkish troops as well as the pilgrims. This may seriously interfere with the Haj for some time to come and have an ill influence on Turkish recruiting.

Malaria at Delhi.

There has been a severe outbreak of malaria in the new capital, but with the advance of cooler weather it has begun to decline.

Rat Destruction.

A Punjab Government press *communiqué* says: Rats which abound in all Punjab towns and villages are directly responsible both for the large numbers of valuable lives from plague and for enormous financial loss from the destruction of crops and eating of grain. Sardar Bahadur Dyal Singh Man, of Faridkot, has recently brought to notice and improved the country method for destroying rats in houses and fields by blowing smoke derived from burning *bhusa* (chopped straw) directly into the rat holes, all exits marked by the issue of smoke being immediately closed with clay. He has also devised a simple and cheap stove for the purpose, which can be obtained from the superintendent, Model Farm, Faridkot. An experiment with this method on a large scale was carried out in Sargodha in May and June. Three months after the operation trapping was very carefully carried out, with the result that it took three weeks to catch the same number of rats which before the operations were caught in a single day.

The Colvin Hospital at Allahabad.

In connexion with the unsatisfactory financial condition of the Colvin Hospital, Allahabad, a public meeting was held in the Mayo Hall recently, Mr. H. Spencer, I.C.S., C.I.E., presiding. The gathering was small but representative of all classes and communities. The president opened the proceedings with a Hindustani speech in which he pointed out that ten years ago the state of the hospital was very bad, but that Colonel J. F. Maclaren, I.M.S., the late civil surgeon, had by his improvements made it a model hospital. In 1910 Colonel C. C. Manifold, I.M.S., Inspector-General of Civil Hospitals, United Provinces, said: "This is a model hospital I consider, and hope that in time all the Sadr hospitals in the larger towns in these provinces will aspire to create the same class of equipment and organisation as exists here." In another note of his made a year later in 1911, he said: "The whole hospital is a model of cleanliness." The improvement of the hospital was only checked by the capacity of the wards, said the president, who concluded with an earnest plea for funds in order to make the work of the institution more effective. Rai Ragho Prasad Narian Singh Bahadur, of Baraon Estate, opened the subscription list by announcing a donation of Rs.5000, and Lala Nisheshardas followed with another donation of Rs.5000. There were further donations varying from Rs.2000 to Rs.50, which brought the total subscribed at the meeting to Rs.15,016. A fund of Rs. 50,000 is required.

Nov. 7th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

The Baby Bonus Scheme.

THE proposal of the Prime Minister to pay a bonus of £5 on every registered birth in the Commonwealth has, as might have been expected, proved, on the whole, immensely popular. The measure has been formally introduced into the Federal House, and will be pushed through at once. It excludes certain coloured native mothers, and provides a penalty of £100 for misrepresentation. Otherwise the Bill is a very simple one, and the bonus is applicable to illegitimate and legitimate alike. Some criticism from the moral aspect has been made by a section of the clergy, and some doubt has been expressed as to the power of the Commonwealth to provide money for such a purpose, but neither objection is likely to have any weight.

A Rival Bonus in Births.

The Chief Secretary of New South Wales recently outlined a State scheme for maternity endowment which is independent of the Commonwealth bonus. The essence of the scheme, the cost of which is estimated at about £60,000 a year, is free medical and skilled nursing attendance in such cases. The scheme is altogether independent of the maternity bonus legislation of the Federal Parliament, the £5 grant from this source Mr. Flowers regarding as "pin-money" for the mother. The State of New South Wales, Mr. Flowers says, is in a better position than the Commonwealth Government to take a systematic plan of maternity assistance in hand, having ready at its disposal public hospitals, which it subsidises, the system of local government, medical officers in country districts, and the bush nursing institution, which has lately been introduced. All these factors will aid the State in the successful carrying out of the new system. Under the scheme the Government will pay the medical and nursing fees, which will be standardised, and as far as possible the public hospitals will be utilised. It is contemplated by the Minister that annexes will be constructed where the existing accommodation may be deemed insufficient in town, suburban, or country hospitals, and it will rest either with the medical officer whether cases are dealt with in the general institution or at the home of the patient, or with the latter. But medical and nursing treatment is to be made compulsory under the new scheme; that is to say, Mr. Flowers says that, since the State will undertake the responsibility of paying for such skilled attendance, the obligation will be upon heads of families to avail themselves of it, under penalty. In the case of friendly societies the Chief Secretary has recently ascertained that in 70 per cent. of maternity cases are the lodge doctors' services requisitioned, this being an increase of 30 per cent. in the experience of lodges over the period of a decade or so. The recommendation of the scheme, Mr. Flowers says, is that injury to child life should be enormously minimised, to the great advantage of national health and stamina. The friendly societies' machinery will be made use of in connexion with this maternity endowment system, as the societies' funds will to this extent be relieved. In country centres the local hospitals will be enlarged for the accommodation of such cases, and in remoter country places the bush-nursing scheme will be extended and elaborated, so that the benefit of the endowment may be carried far and wide. The reason for using hospital accommodation under the scheme is that it is well known that better attention and comfort would be available there than in many of the poorer homes. The author of the scheme says that the taint of pauperising the people cannot be laid at its door, for the simple reason that people who prefer to pay the medical and nursing fees will be free to do so; but whether the Government or the individual meets such charges, the doctor and the nurse must be called in. Mr. Flowers realises that his scheme will necessitate the employment of a large staff of nurses, and at least 12 months' obstetric training will be insisted on. From inquiries in the proper quarter he anticipates no dearth of nurses once the scheme is properly launched. A proper choice of doctors will be allowed patients, as the State will not put itself in the position of discriminating between medical men, the Government being more concerned with paying for, rather than selecting, the medical attendance.

Complaint against a Hospital.

The Fairfield Infectious Diseases Hospital near Melbourne has been a fruitful source of complaints in recent years, mainly brought about by insufficient accommodation. A more serious complaint was made recently by a parent whose child died in the institution from diphtheria. It is stated that no intimation of the death was given for several days, and that the body remained in the hospital mortuary for nearly a week. The matter was mentioned in Parliament, and the Premier appointed a police magistrate to inquire into the allegations. No report has yet been made, but the hospital explanation was that confusion arose between patients of the same name.

Railway Accident.

An unfortunate accident occurred in Melbourne during the progress of the Agricultural Show as the result of a collision between a Show train and an ordinary suburban passenger train. The signals were alleged to be against the driver of the Show train, and this was borne out by the fact that the other train could not have been where it was (on an interlocked crossover) unless such had been the case. At the inquiry the medical attendant gave evidence that this

driver had been under his care for neurasthenia and he had given a certificate to that effect, and recommended him as fit for "light work." The driver did not appear, but consented to be medically examined, and three physicians and three oculists were nominated, one pair on behalf of the department, one pair on behalf of the public, and one on behalf of the driver himself. The medical evidence for the department and the public showed that slight neurasthenic signs were present one week after the accident, and that vision was reduced to "middling" (6/12 and 6/18). The physician and oculist on behalf of the driver considered that neurasthenia was marked, and vision might be temporarily disturbed. Eventually the jury found the accident due to the negligence of the driver, but that it was not culpable negligence, being an error of judgment due to the state of his health. This verdict has been considered very unsatisfactory. It involves the query whether the driver was fit for work. The departmental officials allege that they had no reason to doubt it. Another unpleasant feature of the accident is the number of claims against the railway department. At the time it was considered that outside two persons killed and about 20 taken to hospital there could not be more than 50 who were slightly suffering from shock. The list has grown to nearly 400.

Medical Inspection of School Children.

The progress of medical inspection in Queensland is rapid. The current year's estimates provide for the following positions: medical inspector, £450; dental, £300; four part-time medical inspectors, £400; eye specialist, £500; two temporary additional dental, £400. In addition special grants to 22 hospitals, total £1100; and travelling allowances, £1350.

Pharmaceutical Defence.

A Pharmaceutical Defence Association has been formed in Victoria on similar lines to the Medical Defence Association. It will undertake the defence of actions brought against members for damages, and generally protect their interests.

Sydney Hospital.

Extensive additions are in contemplation to the Sydney Hospital. The institution fronts Macquarie-street and abuts on the Domain at the rear. It is now proposed to take a slice out of the Domain and build a new wing. Part of the original building still in use was portion of the old parliament houses.

Oct. 15th.

Obituary.

ROBERT MAITLAND O'REILLY,

SURGEON-GENERAL, UNITED STATES ARMY, RETIRED.

Robert Maitland O'Reilly, Major-General, U.S. Army, retired, Surgeon-General of the army from Sept. 7th, 1902, to Jan. 14th, 1909, died from uræmic poisoning on Nov. 3rd. He was born at Philadelphia, on Jan. 15th, 1845, and was descended from an old Irish family, one branch of which settled in Spain and a member of which had been Captain-General of Cuba, and one of the Spanish Governors of Louisiana. He was educated in the public schools of his native city, and his medical studies at the University of Pennsylvania were interrupted by the outbreak of the Civil War. In August, 1862, he was appointed in the Military Hospital Service as an Acting Medical Cadet, serving in various military hospitals up to the close of the war. Resuming his medical studies he was graduated from the University of Pennsylvania in March, 1866.

In May, 1867, he was appointed Assistant-Surgeon, United States Army, with the rank of 1st Lieutenant, and thereafter his service was continuous and his promotion rapid. He received his Captaincy in 1870, was made Major and Full Surgeon in 1886, and Lieutenant-Colonel in 1900, during which time he saw much active field service, particularly during the labour strikes in 1877 and in the expeditions against the hostile Sioux in 1874 and 1890. During the periods 1882 to 1889 and 1893 to 1897 General O'Reilly was on duty at Washington, having been appointed Attending Surgeon in October, 1874. He was physician to the White House during President Cleveland's two administrations and a warm personal friend of the latter. At the outbreak of the Spanish-American War General O'Reilly was appointed Chief Surgeon of the First Independent Division, and on May 20th, 1898, was commissioned Lieutenant-Colonel and Chief Surgeon of Volunteers. He was in Cuba from Nov. 16th, 1898, to Nov. 11th, 1899, as Chief Surgeon of the Division on the staff of Major General Wade at Havana. During the war he was an active member of boards for selecting camp sites in the southern states and the cleaning up of Havana, and in December, 1898, went to Jamaica to study tropical hygiene in reference to the American occupation of colonial possessions. After his return he was Surgeon-General of the Department of California until Sept. 7th, 1902, when he was appointed Surgeon-General of the Army, serving until his retirement in 1909. He was a delegate to the International Conference for the Revision of the Geneva Convention at Geneva, Switzerland, in 1906. In 1903 General O'Reilly collaborated with Major William C. Borden in a monograph on "Military Surgery," which was published in the fourth edition of Keen's modern text-book. General O'Reilly did much to elevate the *personnel* and status of the Army Medical Corps through his tact, his unfailing courtesy, and his charming manners, as well as through his example of official and scientific competency.

FRANK GODFREY, L.R.C.P. & S. EDIN.

WE regret to announce the death of Mr. Frank Godfrey, which took place at his residence, San Roque, Nettlestone, in the Isle of Wight, on Nov. 3rd.

Mr. Godfrey was born on July 18th, 1842, and was educated at Anderson's College, Glasgow. As a young man he became a member of the British Legion which was formed to aid Garibaldi in 1860–61, and four days after reaching Naples saw service at Capua. Later he acted as interpreter, and his professional knowledge enabling him to attend the wounded, he was promoted to hospital sergeant on the field for conspicuous gallantry. He was present at the historic meeting of King Victor Emmanuel and Garibaldi when the General handed over the Kingdom of Sicily and Naples to the King. After the disbandment of the Legion he qualified as L.R.C.P. & S. Edin. in 1865, and was appointed to the convict hospital hulk at Gibraltar. In this country he held at one time the positions of surgeon to the City of London Lying-in Hospital and of surgeon to the North-West London Hospital for Diseases of Women and Children. He was honorary consulting surgeon to the Islington Dispensary, honorary medical officer to the Actors' Association, medical officer to the General Post Office, and ex-President of the North London Medico-Chirurgical Society. He went to reside in the Isle of Wight some 14 years ago, and for a time served on the St. Helens district council.

Mr. Godfrey in the many walks of a busy life was esteemed for his kindness and skill.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Karl Koehler, of Göttingen, medical privy councillor, retired since 1905, at the age of 65.—Dr. Samuel Ch. Emley, formerly adjunct professor in the University of Kansas School of Medicine.—Dr. Wm. F. Dudley, adjunct professor of laryngology and rhinology in the Long Island College Hospital, Brooklyn.—Dr. H. Chavanis, formerly physician to the Saint Etienne hospitals.

OXFORD CONFERENCE ON VOICE TRAINING.—Under the auspices of the University branch of the Voice Training Society a conference was held recently at Oxford with the object of making voice training a part of the education of candidates for Holy Orders. Canon Scott Holland presided. Mr. Waggett, who pointed out the importance of the trained voice to teachers of the people, said that catarrhal affections were more common in England than in any other part of this hemisphere, and insisted on the duty of those who had the instruction of youth thoroughly to understand the voice, its powers and its limitations. Sir William Osler thought there was no voice of the same natural sweetness and softness as the English voice, but its natural characteristics must be brought out by early training. The Master of Pembroke and the Rector of Exeter also dwelt on the necessity of voice training, Canon Scott Holland urging those present to support Miss D'Orsey's school of voice training as a duty.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

TUESDAY, NOV. 26TH.

THE General Council of Medical Education and Registration began its winter session to-day at its offices, 299, Oxford-street, W. Sir DONALD MACALISTER, the President, was in the chair.

New Members.

The following new members took their seats on the Council:—Dr. George Wilks (introduced by Dr. Norman Moore) as Representative of the Society of Apothecaries, London, for one year from Oct. 22nd, 1912; and Dr. John Christie McVail (introduced by Dr. Knox) as Crown nominee for Scotland for five years from Oct. 28th, 1912.

The President's Address.

The PRESIDENT delivered his address. He said:—

GENTLEMEN,—It falls to me once more to record changes in the membership of the Council. During the summer we lost by death our colleague, Mr. Arthur Trehern Norton, C.B., who since February, 1910, had represented the Society of Apothecaries of London. Though his period of office was short, it was long enough to procure him the regard of the Council, which did not fail to appreciate his diligent attention to business and his soldierly courtesy of bearing. In his place we welcome Mr. George Wilks, formerly Master of the Apothecaries' Society.

On Saturday we received from the Privy Council an official notification of the appointment by His Majesty of Dr. J. C. McVail as the Crown member for Scotland, in the room of his brother Sir David C. McVail, whose fourth term of office has just expired. Sir David McVail first joined the Council 26 years ago, when the Medical Act of 1886 became law. It is well known that he took an active part in shaping that measure, which modified in many respects the powers of the Council as regards medical education and registration, and in some degree also the relations of the Council both to the profession and to the public. His interest in the administration of the Act was always keen; and no suggestion which appeared to be at variance with its tenour could hope to escape his vigilance. As a member of the Executive Committee, of the Committees on the Pharmacopœia, on Public Health, and on the National Insurance Act, and latterly as chairman of the Examination Committee, he continued to the end of his service to make his influence felt in many departments of our public work. The distinguished mark of Royal favour recently conferred upon him was cordially welcomed by the Council, as a fitting recognition of his strenuous endeavours on its behalf over a period of years longer than can now be reckoned by any of its members. Those who, like myself, have been the longest associated with him will be the first to miss the stimulus of his trenchant criticism. In Dr. John McVail we acquire a member of high eminence and wide experience in relation to departments of the public medical service of which from time to time the Council has of necessity to take cognisance. To his knowledge of general practice he has added an expert acquaintance on the professional side, with sanitation, with the Poor-laws, with State Medicine and medical jurisprudence, and lastly with the still unsolved problems of National Insurance and the prevention of tuberculosis. It cannot be otherwise than advantageous to the Council to have at command in these, as it has in other departments, such as dentistry, public health, and midwifery, the counsel and coöperation of members occupying positions of acknowledged authority in their several specialties. As vice-chairman of the National Insurance Commission for Scotland, Dr. McVail will have it in his power to make contributions of value to the Council's discussions of a new and extremely important branch of State Medicine. Our chief need for some time to come will be authoritative information regarding the policy and practice of the National Insurance administration, especially in its relation to professional training and efficiency. For that information we shall look with confidence to the new Crown member for Scotland.

The Council will learn with regret of the death of Dr. Cocking, of Sheffield, who represented the University of that city from 1905 to 1911. The published tributes to his character and services have amply confirmed the impression left upon the Council by his memory.

In accordance with the resolution of the Council, passed *memine contradicente* on June 4th, I communicated to the Lord President your desire that steps should be taken to procure the insertion, in the Government of Ireland Bill, of provisions reserving to the Imperial Parliament the control of legislation relating to the Medical and Dentists Acts. At the request of the Government I prepared a Memorandum setting forth the general grounds on which the Council's resolution was commended to the favourable consideration of Parliament. This Memorandum has been circulated, and will be brought before you in due course in order that, if you think fit, it may be entered in the minutes. There is reason to believe that it has been considered by the Cabinet, but no communication from the Lord President on the subject has yet been received. Notices by private Members, proposing amendments to the Government of Ireland Bill in the general sense of your resolution, have appeared on the Order paper of the House of Commons, but under the procedure adopted by the House they have not come up for discussion. The importance of the subject, especially in its bearing on the continued validity, for registration purposes, of qualifications granted in Ireland, appears to have impressed itself on non-official Members of Parliament, and there is some ground for the expectation that, during the stage of "report," an opportunity will be found for its consideration.

The National Insurance Act, and the rules and regulations proposed to be made thereunder, have received the careful attention of your Special Committee. The results of their action have been communicated to members, and will be laid before you in the form of a report. Through the Privy Council an early draft of the Provisional Regulations for Medical Benefit was submitted for criticism by the committee in September last. The committee's terms of reference appeared at first sight to limit its consideration to the effects of the Provisional Regulations "on Medical Education and Examination in relation to the Efficient Practice of Medicine"; but the members deemed it their duty to direct the Commissioners' attention to various other points concerning which on previous occasions the Council had formulated resolutions. In particular, the committee reiterated the opinion of the Council to the effect that, in the absence of any sufficient provision for the "institutional" treatment of insured persons, the existing facilities for the study of clinical medicine, surgery, and midwifery might be seriously endangered; and that the efficiency of medical education, and consequently of medical practice among all sections of the public, might thereby be impaired. The Insurance Commissioners have informed the Lord President that the committee's suggestions were found to be exceedingly useful and valuable; and that, apart from the question of hospital facilities, which the Commissioners appear to regard as outside the present Act, effect was given to these suggestions in the Provisional Regulations as issued. It is understood that the Regulations are still subject to modification, and that negotiations to this end are now in progress. On your behalf I have asked the Lord President to procure for the committee an opportunity of considering any such modifications before they are finally approved. I venture, moreover, to suggest the expediency of widening the reference of last June, so as explicitly to authorise the committee to make representations, and to report, on any matter arising out of the Act which touches the Council's functions.

In response to suggestions from the Council the Lord President has prepared, and introduced into the House of Lords, a Bill for amending in a few particulars Section 8 of the Medical Act, 1886. This section governs the dates prescribed under the regulations for the election of Direct Representatives to the Council. If carried into law the amendments will enable the Privy Council to lay down new regulations, which will have the effect of securing that general elections shall be held at regular intervals of five years, even though a casual vacancy should from time to time render necessary a by-election in the interval. Again, by increasing the period between the issue of the returning officer's precept and an election, time will be given to ascertain whether the election is to be contested or not. If it should prove to be uncontested, it will be possible to

avoid the expense of preparing voting papers and the like. The ultimate result of the changes proposed should be a considerable saving in respect of election expenses, which under the present regulations, owing to a number of unforeseen circumstances, have of late years amounted to a large and needless tax on the Council's funds. The Bill provides that the tenure of office of the present Representatives shall extend to the end of 1916, in order that the next five-years period shall begin on the first day of January, 1917. The special thanks of the Council are due to the Lord President for his effective assistance in furthering this simple but necessary administrative reform.

It is with much satisfaction that I report the completion in Canada of the legislation necessary to provide for the establishment of a federal Medical Council and a uniform system of registration for the Dominion. To bring this about 10 or 12 special Acts of Legislature have been required, at the instance of the central and the provincial governments. The organisation of the first Dominion Medical Council has been entrusted to the Secretary of State at Ottawa, who is himself a medical man. At his request our Registrar has forwarded to the new body for its guidance a set of the Council's publications, forms, regulations, &c. Dr. T. G. Roddick, of Montreal, to whose patient labours is due the achievement of Canadian interprovincial reciprocity through Dominion registration, has kindly promised to keep the Council informed of the future progress of the scheme.

I have also to report the completion by Mr. Harper, solicitor to the Council, of an important volume containing an account of all the cases dealt with by the Higher Courts of Law, in which questions of the interpretation of the Medical and Dentists Acts have been raised. Mr. Harper has been able to add considerably to the reports collected in the small book of "Cases" which has hitherto been at the disposal of members; and he has greatly enhanced the usefulness of the new work by admirable introductions, digests, and appendices. As the functions and procedure of the Council as a court of discipline are governed not only by the letter of the statutes, but also by the judicial construction placed thereon, Mr. Harper's work should prove of great value to the profession and the public, as well as to the Council itself. The Executive Committee accordingly propose that the book should be published through the usual channels, in order that it may be accessible to all whom it concerns. The committee have, in your name, conveyed to Mr. Harper a proper acknowledgment of the pains and skill he has devoted to the compilation

By your instructions the recent report on Indian candidates for professional examinations in this country was sent to all qualifying bodies and medical schools. The report embodied suggestions made by the India Office regarding methods for the attestation of certificates of medical study and examination in India, and invited observations on it from the authorities concerned. The absence of any objection to the suggestions thus made justifies the belief that they have been found satisfactory, and that they constitute an acceptable improvement on the existing practice of the examining boards and professional schools. The Education Committee has made considerable progress with the revision of the list of recognised preliminary examinations held outside the United Kingdom, regarding which it has been in correspondence with the various educational authorities of the Empire. By next session the committee will be able to place before the Council the results of the inquiry, with a view to the publication of a new list, which will come into operation at the beginning of 1914. The Pharmacopœia Committee has, with the help of its editors, been engaged in preparing for press the draft of four large sections of the text of the revised Pharmacopœia. It is hoped that the first proofs may be ready for submission to the committee early in the new year, and that thereafter the work that still remains to be done will be rapidly advanced. The Committees of Reference in Chemistry and in Botany have rendered valuable service in supplement of the labours of the Committee of Reference in Pharmacy. The Treasurers and the Registrar have instituted an inquiry into the existing methods of preparing and printing the matter contained in the Medical Register and the Dentists Register, with a view to its clearer and more convenient presentation. It appears probable that, by improved arrangements between the office and the printers and publishers, an appreciable saving of expense may be effected and a wider circulation may be obtained for the official volumes. In the existing state of the Council's finances it is very desirable that economy should be practised in every branch of its work, and particularly in cases where, as here, there is a prospect of greater efficiency and convenience.

Much of your time this session will be occupied with the consideration of penal charges. Apart from those in which at the last sitting judgment was postponed, the cases to be dealt with arise from the conviction in courts of law of registered practitioners found guilty of various offences. It falls to the Council to decide whether or not, regard being had to the gravity of the charges proved in other courts, it will direct the erasure from the Register of the practitioners' names. In this connexion it is proper to record that the Home Secretary has now, at the request of the Penal Cases Committee, issued instructions to the police authorities throughout England to notify the Council of all cases in which medical or dental practitioners are convicted, whether of indictable or of other offences. Such notifications have for some years been regularly received from Scotland and Ireland; in future the English practice will be assimilated to the Scottish and Irish practice. It is not unlikely that, in consequence of the amended instructions, the Penal Cases Committee will be called upon to consider a larger proportion of cases from England than has hitherto been officially brought to its notice.

Lastly, I must call your attention to a special inquiry to be held on Thursday, for which there is no strict precedent on the medical side of our proceedings. In this case there is no "accused practitioner," as the inquiry relates to the continued appearance in the Medical Register of the name of a practitioner alleged to have died abroad some years ago. It is further alleged that some one, who is unqualified and therefore not subject to your jurisdiction, has been personating the deceased practitioner and practising medicine under his registered name and qualifications. If these allegations are proved, the entry in the Register must be erased by your direction; and the charge of personation will then have to be investigated by the criminal authorities. The judicial assessor and the solicitor to the Council have made themselves acquainted with the legal aspects of the case, and will be prepared, as always, to offer such professional advice as may be necessary for your guidance in the inquiry.

Dr. LITTLE, in proposing a vote of thanks to the President for his address, joined in his expressions of regret at the disappearance of Sir David McVail from the Council. All the members of the Council held him in high esteem, and enjoyed his pleasant and original manner in presenting his views to them.

Service Tables.

The Council receives tables showing the results of examinations for vacancies in the medical department of the Royal Navy, the Army Medical Service, and the Indian Medical Service. A resolution was passed conveying the thanks of the Council to the Director-General of the Medical Department of the Royal Navy, the Director-General of the Medical Department of the Army, and the Under-Secretary of State for India respectively for the returns which they had again furnished to the Council.

Vacancy on Executive Committee.

Dr. Norman Walker was elected successor to Sir David McVail on the Executive Committee.

During the rest of Tuesday's sitting several of the important subjects alluded to in the President's address were debated.

WEDNESDAY, NOV. 27TH.

Penal Cases.

The Council at its sitting heard penal cases and directed the erasion from the Register of the names of several practitioners.

UNIVERSITY OF LONDON: UNIVERSITY COLLEGE.—The new pharmacology laboratories at the University College, built by the generosity of Mr. Andrew Carnegie, will be opened by the President of the Royal College of Physicians of London, Sir Thomas Barlow, Bart., on Wednesday next, Dec. 4th, at 5 P.M. Lord Reay, K.T., the chairman of the College committee, will preside, supported by the Vice-Chancellor of the University, Dr. W. P. Herringham.

Medical News.

UNIVERSITY OF CAMBRIDGE.—The following degrees were conferred on Nov. 22nd:—

M.C.—A. H. Crook (Christ's).
M.B.—A. H. Crook (Christ's).
M.B. and B.C.—B. A. Playne (Pembroke) and J. Winterbotham (King's).

—The offer of Colonel Walter Harding to establish a lectureship in Zoology in the University has been gratefully accepted.

UNIVERSITY OF LONDON.—At examinations held in October the following candidates were successful:—

THIRD (M.B., B.S.) EXAMINATION FOR MEDICAL DEGREES.

Honours.—* Cecil Meredyth Jones, Westminster Hospital * † ‡ Charles Jennings Marshall (University medal), Charing Cross Hospital; and * Julian Taylor, University College Hospital.
* Distinguished in Medicine. † Distinguished in Pathology. ‡ Distinguished in Forensic Medicine.

Pass.—Carlyle Aldis, Guy's Hospital; Walter Martin Ash, London Hospital; Claude Alexander Birts, University College Hospital; Florence Hilda Bousfield, London (Royal Free Hospital) School of Medicine for Women; Raymond Brewitt-Taylor, St. Bartholomew's Hospital; Basil William Brown, Westminster Hospital; Bertie Isaac Cohen, St. George's Hospital; Thomas Philips Cole, Guy's Hospital; Gertrude Dearnley, London (Royal Free Hospital) School of Medicine for Women; Lionel Alfred Dingley, University College Hospital; Herbert Thomas Evans, St. George's Hospital; Walter Barham Foley, St. Thomas's Hospital; James Maurice Foord, University of Leeds; George Edward Genge-Andrews and William Stanley George, Guy's Hospital; Alfred John Gibson, St. Bartholomew's Hospital; Charles Gibson, London Hospital; Charles D'Oyly Grange, St. Bartholomew's Hospital; Frederick Wood Hamilton, Middlesex Hospital; Alan Waltes Hansell, University of Leeds and University College Hospital; Arthur William Havard, London Hospital; Bernard Whitchurch Howell, St. Bartholomew's Hospital; Augustine Henry Hudson, St. Thomas's Hospital; George William Blomfield James, St. Mary's Hospital; Mary Sophia Jevons, London (Royal Free Hospital) School of Medicine for Women; Mirza Mohammed Khan, John Stephen Herbert Lewis, and Robert Henry Liscombe, University College Hospital; Dorothy Cochrane Logan, University College, Cardiff, and London (Royal Free Hospital) School of Medicine for Women; Emily Clara Macirone, London (Royal Free Hospital) School of Medicine for Women; Patrick John Monaghan, Guy's Hospital; John Forbes O'Connell, St. Mary's Hospital; Harold Winnock Parrott, London Hospital; Purushottam Tulsidas Patel, Grant Medical College, Bombay, and London Hospital; Sara Louisa Penny, London (Royal Free Hospital) School of Medicine for Women; Frederick Harold Rees, University College Hospital; John Frederick Gwyther Richards, Guy's Hospital; Walter George Rogers, University College, Cardiff, Charing Cross, and London Hospitals; Eric Graham Saunders, St. Thomas's Hospital; William Faulkner Valentine Simpson, London Hospital; Henry Kenneth Victor Soltau, St. Bartholomew's Hospital; James Lennox Stewart, Guy's Hospital; John Tattersall, St. Mary's Hospital; Francis Richard Todd, St. Bartholomew's Hospital; and Edward Alfred Wilson, Middlesex Hospital.

The following candidates have passed in one of the two groups of subjects:—

Group I.—George Francis Bradley, London Hospital; Jules Maurice Curé, St. Bartholomew's Hospital; Alexander Lindsay Fitzmaurice, Guy's Hospital; Frank Rex Fletcher, London Hospital; Wilfrid Montague Glenister, St. Bartholomew's Hospital; James Moncrieff Joly, Guy's Hospital; Thomas Pomfret Kilner, Victoria University of Manchester; George Sefton Miller, Guy's Hospital; Henry Martin Rashbrook, London Hospital; William Robinson, Guy's Hospital; and Margaret Edith Elliott Smith and Mary Alice van Ingen, London (Royal Free Hospital) School of Medicine for Women.

Group II.—John Appleyard and Edward Bach, University College Hospital; Alured Charles Lowther O'S. Balderdeck, St. Bartholomew's Hospital and University of Cambridge; Arthur Barrett Cardew, Middlesex Hospital; Frederick William Theodore Clemens, University of Bristol; Michael Joseph Cronin, London Hospital; George Rowland Dobrashian, University College Hospital; Andrew Royston Elliott, London Hospital; Douglas Medlicott Gibson, St. Thomas's Hospital; Robert Lister Horton, University College Hospital; Francis Harry Kelly, Middlesex Hospital; James Duncan Lyle, London Hospital; Gerald Roche Lynch and Cresswell Lee Pattison, St. Mary's Hospital; William Barwise Sanders, University College Hospital; Arthur Richard Sharrod, London Hospital; Aubrey William Venables, St. Mary's Hospital; Ernest Wentworth Wade, University of Bristol; Noel Tancred Whitehead, St. Thomas's Hospital; and Alan Wilson, University College Hospital.

B.S. EXAMINATION (*for Students who graduated in Medicine in or before May, 1904*).

Pass.—Frederick Champ McCombie, M.D., King's College Hospital.

N.B.—This list, published for the convenience of candidates, is issued subject to its approval by the Senate.

SOCIETY OF APOTHECARIES OF LONDON.—At examinations held recently the following candidates passed in the subjects indicated:—

Surgery.—T. J. Gibson (Sections I. and II.), Madras and Middlesex Hospital; and J. W. Harrison (Sections I. and II.) and G. R. Lynch (Sections I. and II.), St. Mary's Hospital.

Medicine.—H. E. B. Finlaison (Sections I. and II.), St. Mary's Hospital; T. J. Gibson (Section II.), Madras and Middlesex Hospital; W. C. Himely, Paris and Middlesex Hospital; W. S. Hyde (Section II.), Guy's Hospital; and E. M. Morris (Section I.), Charing Cross Hospital.

Forensic Medicine.—M. P. Dos Santos, Louvain; A. M. L. Greaves, Royal Free Hospital; T. H. W. Idris, University College Hospital; and E. M. Morris, Charing Cross Hospital.

Midwifery.—G. R. Lynch, St. Mary's Hospital; E. M. Morris, Charing Cross Hospital; and S. Zarchi, Freiburg and London Hospital.

The Diploma of the Society was granted to the following candidates, entitling them to practise medicine, surgery, and midwifery:—T. J. Gibson and W. C. Himely.

FOREIGN UNIVERSITY INTELLIGENCE.—*Burlington* (*University of Vermont*): Dr. F. W. Sears has been appointed Lecturer on Mental Diseases.—*Cologne* (*Academy of Practical Medicine*): Dr. Thelen has been appointed Lecturer in Urology, and Dr. Zilkens Teacher of Dentistry.—*Copenhagen*: Mdlle. Hedwig, M.D., has been recognised as *privat-docent* of Orthopædic Surgery.—*Cracow*: Dr. Emil Godlewsky, Extraordinary Professor, has been promoted to the chair of Embryology and General Biology.—*Czernowitz*: Dr. Fritz Netolitzky, Assistant in the Institute for Food Analysis, has been appointed Extraordinary Professor of Pharmacognosis.—*Freiburg*: Dr. K. Gauss, *privat-docent* of Gynæcology, has been granted the title of Professor.—*Göttingen*: Dr. Ernst Schultze, Professor of Psychiatry in the University of Greifswald, has been appointed to the chair of Mental and Nervous Diseases, in succession to the late Dr. Cramer.—*Halle*: Dr. Kathe has been recognised as *privat-docent* of Hygiene.—*Königsberg*: Dr. Kurt Goldstein, *privat-docent* of Psychiatry, has been granted the title of Professor.—*Leipsic*: Dr. Paul Frangenheim has been appointed Oberarzt of the Surgical Clinic.—*Marburg*: Dr. R. Hagemann has been recognised as *privat-docent* of Surgery.—*Padua*: Dr. M. Schiavoni has been recognised as *privat-docent* of External Pathology, and Dr. A. Carnevali as *privat-docent* of Dermatology and Syphiligraphy.—*Philadelphia* (*Woman's Medical College*): Dr. William T. Shoemaker has been appointed Adjunct Professor of Ophthalmology.—*Rome*: Dr. E. Franco has been recognised as *privat-docent* of Medicine, and Dr. Pansini and Dr. E. Bartoletta as *privat-docenten* of Ophthalmology.—*Rostock*: Dr. Hans Quechenstedt has been recognised as *privat-docent* of Medicine. Dr. Max Wolters has been promoted to the chair of Dermatology.—*Shanghai* (*German Medical School*): Dr. Walter Fischer, Assistant in the Pathological Institute, Göttingen, has been appointed *docent* of Pathology, and will commence his lectures in January.—*Tübingen*: Dr. O. Nägeli-Näf, of Zürich, has been appointed Extraordinary Professor and Director of the Medical Policlinic, and Dr. H. Schloessmann has been recognised as *privat-docent* of Surgery.—*Turin*: Dr. Valvasori, of Padua, has been recognised as *privat-docent* of Pædiatry.—*Vienna*: Dr. Schumacher, Extraordinary Professor of Anatomy in the University, has been appointed Professor of Anatomy in the Veterinary School. Dr. K. Hochsinger has been appointed to the charge of the newly erected Währinger Children's Hospital. Dr. Ludwig Adler has been recognised as *privat-docent* of Midwifery and Gynæcology.

ROYAL MICROSCOPICAL SOCIETY.—A meeting of this society was held on Nov. 20th, Mr. G. H. Plimmer, F.R.S., the President, being in the chair.—Mr. E. Heron-Allen and Mr. A. Earland communicated a paper on the Distribution of Saccammina Sphærica (M. Sars) and Psammosphæra Fusca (Schulze) in the North Sea, particularly with reference to the suggested identity of the two species. These foraminifera, belonging to the family Astrorhizidæ, and originally described as from the North Sea, but occurring also in all the great oceans, have been the subject of considerable controversy. An abstract of a paper by the Rev. Hilderic Friend on British Henleas was read. The henleas are microscopic annelids belonging to the family of Euchytræids. The genus was created in 1889 by Michaelsen and contained four authentic species and four which were doubtful. Another species was added in 1889 by Bretscher. In 1900 when "Das Tierreich" was published, the number recorded was 5, with 4 doubtful forms. During the next decade some progress was made, 8 new species being added, and 4 definitely recorded as British. In 1911 Friend described H. perpusilla, and added one or two others to the British list. The present paper gives an enumeration of no fewer than 19 species, 18 of which are found in England and 1 in Ireland.

Of these, 7 new to science were found at Hastings in December last, and 3 have been found in Nottingham during the present year. An abstract of a paper by Mr. James Murray, F.R.S.E., on African Tardigrada was read. This paper adds 13 species to the list of African tartigrada. Twelve were described in the author's previous paper, and Daday added a new species, M. tetronyx. There are now recorded 26 species for Africa, 18 for Tropical Africa, and 17 for South Africa. Nine of these were first discovered in Africa, and only one of them (E. perarmatus) has been found outside that continent. A new microscope designed for philatelic purposes was exhibited and described by Mr. Harold S. Cheavin.

ALVARENGA PRIZE OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.—The College of Physicians of Philadelphia announces that the next award of the Alvarenga prize, being the income for one year of the bequest of the late Señor Alvarenga and amounting to about $180, will be made on July 14th, 1913, provided that an essay deemed by the committee of award to be worthy of the prize shall have been offered. Essays intended for competition may be upon any subject in medicine, but cannot have been published. They must be typewritten, and if written in a language other than English should be accompanied by an English translation, and must be received by the secretary of the College on or before May 1st, 1913. Each essay must be sent without signature, but must be plainly marked with a motto and be accompanied by a sealed envelope having on its outside the motto of the paper and within the name and address of the author. It is a condition of competition that the successful essay or a copy of it shall remain in possession of the College; other essays will be returned upon application within three months after the award.

THE ROYAL DENTAL HOSPITAL OF LONDON.—The annual dinner of the staff and past and present students of the Royal Dental Hospital was held at the Hôtel Métropole on Nov. 23rd. Mr. J. Howard Mummery presided. After the usual loyal toasts had been duly honoured the chairman proposed that of "The Past and Present Students of the Royal Dental Hospital and the Dental School." He claimed a long connexion with the hospital, and pointed out how great were the opportunities provided for the education of the student in the present day. He advised the modern student to think and not to put too much confidence in the text-book. Referring to the dignified and important position which dentistry was rapidly reaching as a branch of professional practice, he pointed to the great advance of school clinics by the application of modern dental surgery; to the surgical advances based upon an examination of the teeth; to the first thing which a surgeon now did, which was to look at the mouth and examine its condition before proceeding to a capital operation. The campaign against tuberculosis, he said, went hand-in-hand with that against caries, and the importance of each, he thought, was equal. He gave some useful hints to students as to the way they should study their subjects, and concluded by recommending that they should indulge in a hobby, because it was the best antidote to drudgery. Mr. F. Canton briefly acknowledged the toast on behalf of the past students, comparing the efficiency of the present hospital as a teaching and administrative institution with the state of things many years ago. Mr. Kidner, on behalf of the present students, in an excellent and entertaining speech, expressed a very cordial appreciation of the work of the teaching staff, and assured them that he and his fellow students were grateful for the energies which the staff devoted to the task of fitting them for the work of their profession. The Dean, Mr. W. H. Dolamore, completed the trio of replies to the toast, and said it was a matter for congratulation that the annual dinner was so well attended on the present occasion. The school was making satisfactory progress and they were doing well in the pass-lists. Mr. W. W. James proposed the toast of "The Visitors," to which Sir Alfred Pearce Gould, K.C.V.O., replied. He rejoiced to hear the Dean's statement in regard to the prosperity of the school. The progress of dentistry, he thought, was remarkable, and surgeons owed much to dental surgery, which had demonstrated the importance of the cleanliness of the teeth. Causation, he added, was often a mystery traced eventually back to teeth. Mr. J. F. Colyer, in proposing the toast of "The Chairman," first referred to the regrettable absence of their energetic secretary, Mr. J. F. Pink, through illness. In the past everyone knew that the success of their annual meeting was due largely to his organisation. This year Mrs. Pink had worked hard to make the present occasion a successful one, and their thanks were due to her for the admirable way in which the arrangements were carried through. He said the dental profession were grateful to Mr. Mummery for the valuable contributions he had made to dentistry, referring particularly to his researches on the nerves in dentine. Mr. Mummery replied in appreciatory terms. The enjoyment of the evening was added to by an excellent programme of music, and altogether the occasion was one of the most successful that have been held in past years.

MEDICAL SICKNESS AND ACCIDENT SOCIETY.—The usual monthly meeting of the executive committee of this society was held at 429, Strand, London, W.C., on Nov. 15th. The claim account presented showed a decided margin in favour of the society as against the amount expected. A new feature of the society's experience is to be met with in the number of motor accidents; these show a steady increase, and some at any rate have been serious and have involved long periods of incapacity. No extra premium is charged to members using motor cars or motor cycles. The new proposals received were about up to the average, but an increase in the number of members desiring to insure for higher amounts has taken place, and indicates that those who have had experience of the benefits derived from being insured in the society wish to be covered for the highest amount available under the rules. Under one of the present bonus schemes, should death take place before 65, their representatives would be entitled to an amount which increases automatically with the length of membership and the sum insured. It was decided to hold the annual meeting at an earlier date than usual. Full details of this will be given by advertisements in the medical journals some months in advance. Further information may be obtained from Mr. Bertram Sutton, Secretary, 33, Chancery-lane, W.C.

CENTRAL MIDWIVES BOARD.—A meeting of the Central Midwives Board was held on Nov. 21st at Caxton House, Westminster, Sir Francis H. Champneys being in the chair. A letter was considered from the secretary of a training centre for midwives reporting that a false reference from a matron of a maternity home had been given by a certified midwife with the view of obtaining a position at a hospital. The Board decided that the facts be laid before the local police, and that failing action by them the matter be laid before the Public Prosecutor, and that failing action by him the matter be referred to the Penal Cases Committee. A letter was considered from Mr. J. C. Heaven, acting inspector of midwives for Bristol, inquiring whether an uncertified woman practising as a midwife who makes no special charge for her services, but accepts whatever her patient likes to give her, is practising as a midwife for gain and consequently within the terms of Section 1 (2) of the Midwives Act, 1902. The Board decided that the answer be that the question raised has not yet been settled in law, and that the only way to settle it is by instituting a prosecution under the Act, Section 1 (2). A letter was considered from the clerk of the Middlesex county council as to the difficulty of prosecuting uncertified women under Section 1 (2) of the Midwives Act, 1902, for practising as midwives. A letter was also considered from Dr. J. R. Kaye, county medical officer for the West Riding, on the same subject. The Board decided that a copy of the correspondence be sent to the Privy Council.

WEST SUSSEX AND TUBERCULOSIS.—At its meeting on Nov. 22nd the West Sussex county council had before it a scheme for dealing with tuberculosis submitted by a specially appointed subcommittee which had had the assistance of the county medical officer, Dr. A. G. R. Cameron. The council decided, subject to the approval of the Local Government Board, to appoint a tuberculosis officer at a salary of £500 per annum; also a clerk or clerk dispenser at a salary not exceeding £100; and a health visitor at a salary not exceeding £100, with travelling expense allowance not exceeding £20; to hire a main dispensary at an annual charge for rent, rates, &c., not exceeding £100, and two

branch dispensaries at an annual charge for rent, rates, &c., not exceeding £78 for the two; also to provide five shelters at a cost not exceeding £50, and to incur other expense in relation to the annual cost of such dispensaries not exceeding £222; to incur expenditure not exceeding £300 in the equipment of the main dispensary, and £100 in the equipment of the two branch dispensaries; to incur expenditure in temporary arrangements for the reception of patients in sanatoria or hospitals not exceeding £200; and to enter into arrangements with Insurance Committees and other authorities and persons for dispensary treatment on such terms as the committee thinks fit. Save that one member of the council drew attention to the overlapping which he considered there would be in regard to the medical service of the county with their county medical officer, two school doctors, and now a tuberculosis doctor, the scheme was carried without discussion. The council, like the East Sussex county council, deferred the question of a joint sanatorium. Estimating the population of West Sussex at 176,323, Dr. Cameron considers that sanatorium or other treatment would have to be provided for 300 insured and 300 uninsured persons. The average death-rate from tuberculosis in West Sussex from 1901 to 1905 was 0·90, and in the last five years 0·94, which satisfactorily compares with the death-rate from the same cause over the whole of England and Wales during the same periods.

DONATIONS AND BEQUESTS.—Under the will of the late Miss Elizabeth Stringer the testatrix left £2000 to the Liverpool Royal Infirmary, and £1000 each to the Liverpool branch of the Royal Society for the Prevention of Cruelty to Animals, the Convalescent Home for Women and Children, New Brighton, the Earslwood Asylum for Idiots, and the Hastings and St. Leonards Hospital.—The late Mrs. A. M. Jones, widow of the late Professor T. Jones, of Manchester, has bequeathed £1000 to the Victoria University, Manchester, in augmentation of the endowment of the Professor Tom Jones memorial scholarship; £500 to the University College of Wales, Aberystwith, as an endowment for promoting the study of surgery; £1000 to the Manchester Royal Infirmary, to provide a bed in the surgical ward; £300 each to the Manchester Children's Hospital, the Christie Cancer Hospital, the Lancashire and Cheshire Society for the Care of the Feeble-minded, the Gynæcological Department of St. Mary's Hospital, and the Manchester Surgical Aid Society; and £100 to the Manchester Hospital Works Society.—The Chelsea Hospital for Women has received £157 10*s.* from Mr. F. G. Ivey, £100 from Mr. Thomas Joseph Whiffen, and £52 10*s.* from Mr. Seth Taylor towards its rebuilding fund.

THE ARMY AND NAVY MALE NURSES' CO-OPERATION.—The fifth annual general meeting of this coöperation, which has now become self-supporting, will be held at St. James's Theatre, S.W., on Dec. 10th, at 3 P.M., when Sir Dyce Duckworth, Surgeon-General A. W. May, Surgeon-General G. J. H. Evatt, Sir George Alexander, and Colonel Sir Edward Ward will speak. There will be a programme of music after the meeting.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Mental Deficiency Bill.

IN spite of the fact that the Mental Deficiency Bill will not be advanced through all its Parliamentary stages this year, the Standing Committee of the House of Commons which is charged with its consideration further amended it on Thursday, Nov. 1st.

Clause 17, in its latter part, lays down that the following classes of persons shall be deemed "defectives within the meaning of the Act":—

"(*a*) Idiots .....

(*b*) Imbeciles; that is to say, persons who are capable of guarding themselves against common physical dangers, but who are incapable of earning their own living by reason of mental defect existing from birth or from an early age.

(*c*) Feeble-minded persons; that it is say, persons who may be capable of earning their living under favourable circumstances, but are incapable, through mental defect existing from birth or from an early age (i.) of competing on equal terms with their normal fellows; or (ii.) of managing themselves and their affairs with ordinary prudence;

(*d*) Moral imbeciles; that is to say, persons who from an early age display some mental defect coupled with strong vicious or criminal propensities on which punishment has little or no deterrent effect;

(*e*) Mentally infirm persons; that is to say, persons who through mental infirmity arising from age or the decay of their faculties are incapable of managing themselves or their affairs."

Material alterations were made by the Committee in these definitions

The following definition was, on the motion of Mr. HARRIS, substituted for the one in the text of the Bill: "Imbeciles; that is to say, persons in whose case there exists from birth or from an early age mental defectiveness not amounting to idiocy, yet so pronounced that they are incapable of managing themselves or their own affairs, or in the case of children of being taught to do so."

It was agreed that the definition of feeble-minded persons should be "persons in whose case there exists from birth or from an early age mental defectiveness not amounting to imbecility, yet so pronounced that they require care, supervision, and control for their own protection or for the protection of others, or in the case of children, are incapable of receiving proper benefit from the instruction in ordinary schools."

The definition of moral imbeciles in the clause was modified so that it runs, "persons who from an early age display some permanent mental defect," &c.

Paragraph (*c*) relating to mentally infirm persons was deleted from the clause.

A new subsection was inserted on the motion of the Home Secretary, It provided that "before any regulation is made under this section the draft thereof shall be laid before each House of Parliament for a period of not less than 30 days during the Session of Parliament, and if either of those Houses before the expiration of those 30 days presents an Address to His Majesty against the draft, or any part thereof, no further proceedings shall be taken thereon, without prejudice to the making of any new draft regulation."

Clause 17 as amended was then agreed to.

Mr. MCKENNA intimated that he hoped that the Committee would deal with the following clauses before it concluded its work this session: (17) local authorities; (8) committees for the care of defectives; (12) general duties of local authorities; and (20) power to order defectives to be sent to institutions or placed under guardianship. On these clauses he believed that there was common agreement, and by passing them there would be a basis for the new Bill of next year.

The Committee adjourned.

The Select Committee on Patent Medicines.

The Select Committee of the House of Commons, which is inquiring into the sale and advertisement of patent medicines, has been hearing further evidence from the standpoint of the owners of proprietary remedies. Their contention is that the publication of the formula on the package would amount to revealing a valuable trade secret.

HOUSE OF COMMONS.

WEDNESDAY, NOV. 20TH.

Native Medical Men in Calabar.

Mr. JOWETT asked the Secretary of State for the Colonies whether in Calabar there were hospitals for the exclusive use of natives and non-natives respectively; and whether native doctors, no matter how high their qualifications, were disqualified by reason of their colour from ministering to the sick in either of these institutions, both of which were maintained to a considerable extent by revenue drawn from the natives themselves.—Mr. L. HARCOURT replied: There is a native and a European hospital at Calabar. They are administered by Government medical officers, but I cannot say whether any of the officers in charge at present are natives. The question of allowing private practitioners to take charge of their patients after admission to hospital is under consideration.

The Notification of Pulmonary Tuberculosis.

In reply to Captain FABER, Mr. BURNS said: Pulmonary tuberculosis is a notifiable disease throughout England and Wales.

THURSDAY, NOV. 21ST.

Meat Inspection at Deptford, Birkenhead, and Bristol.

Mr. NANNETTI asked the President of the Local Government Board whether there was any veterinary inspection for the local authorities enforcing the Public Health Act at Deptford, Birkenhead, and Bristol; and, if so, could he state whether such veterinary inspection under the Public Health Acts at the aforesaid places took place, and what numbers were condemned as unfit for the food of man and consequently confiscated.—Mr. H. LEWIS (on behalf of Mr. BURNS) replied: I assume that the honourable Member's question, so far as regards Deptford, refers to the foreign cattle market which is actually within the metropolitan borough of Greenwich, but which is controlled by the corporation of the City of London. I am informed that all animals landed at this market are examined by an inspector of the Board of Agriculture and Fisheries, and that all carcasses are inspected by a duly qualified meat inspector. During 1909, 1910, and 1911, 18, 22, and 15 entire carcasses were condemned, and, in addition, a very small percentage of offal and organs was condemned. At Birkenhead a meat inspector with special training and long experience is engaged on this work. The number of carcasses, parts of carcasses, and pieces of offal condemned in 1909, 1910, and 1911 were 85, 44, and 47 respectively, out of a total number of animals killed of 145,774, 90,330, and 79,215. At Bristol there are two meat inspectors, and the meat condemned in 1909, 1910, and 1911 consisted of 174, 152, and 219 whole carcasses and odd pieces of meat. An inspector has also been appointed whose work consists exclusively in the examination of imported foodstuffs.

Provisions against Cholera Risks.

Sir H. CARLILE asked the President of the Local Government Boa

what special provisions were being made for guarding against the risk of cholera, now rampant in Turkey, being brought into this country; and whether, in view of the maritime traffic between Great Britain and the Black Sea, he was making any arrangements for detailed examination of crews and their effects in all cases where the vessels had touched at the Golden Horn.—Mr. H. LEWIS (on behalf of Mr. BURNS) answered: The Regulations of the Local Government Board dated Sept. 9th, 1907, contain the provisions which are in force for protecting this country against cholera. These Regulations are based on the International Convention. Under the Regulations the Customs officer is required, on the arrival of a ship, to ascertain as far as possible whether the ship is an infected ship or has come from an infected port, and to question the captain. If he finds that the ship is an infected ship or suspected ship, he is required to detain the ship and to inform the sanitary authority.

Sanatorium Treatment in the Holland Division.

Mr. FRANCIS MCLAREN asked the Secretary to the Treasury how many applications for sanatorium treatment had been made from insured persons in the Holland division of Lincolnshire, and how many were now in receipt of treatment.—Mr. MASTERMAN said in reply: Two applications only have been received from insured persons in the district in question. Of these, one was in so advanced a stage of consumption that he died before he could be removed, and the other is now receiving treatment.

The Incidence of Sanatorium Benefit.

Mr. ASTOR asked the Secretary to the Treasury whether in the event of an insured person entitled to sanatorium benefit being recommended for institutional treatment through the tuberculosis officer in charge of a dispensary and being sent to a sanatorium or other institution, the fee of 6*d.* per head now being offered by the Government to medical practitioners would still be paid to that insured person's medical adviser or would be paid to the institution where he was being treated. —Mr. MASTERMAN wrote in reply: The 6*d.* referred to is a capitation payment in respect of the treatment of tuberculous insured persons by general medical practitioners. The aggregate amount of these sixpences contributed in respect of all insured persons is to pay for the domiciliary portion of sanatorium benefit, leaving the remainder of the total sum allocated by the Act for such benefit to the institutional treatment.

The Supply of Drugs under the Insurance Act.

Mr. WORTHINGTON-EVANS asked the Secretary to the Treasury whether any and which Insurance Committee had made provision for the supply of proper and sufficient drugs and medicines and prescribed appliances to insured persons under the National Insurance Act; whether any and which Insurance Committee had yet published a list of the persons and firms who had agreed to supply drugs, medicines, and appliances within its area; and whether any and which committee had fixed a scale of prices therefor.—Mr. MASTERMAN said in reply: The answer is in the negative. The Commissioners are communicating with the Insurance Committees on the subject.

Medical Services in the Highlands.

Mr. MACPHERSON asked the Secretary to the Treasury whether the Committee appointed to consider the position of the Highlands of Scotland, with reference to the medical benefits under the National Insurance Act, had finished their inquiry; whether their report had now been presented; and, if not, when it was likely to be presented.

The Marquis of TULLIBARDINE: Before the question is answered, may I ask whether the Committee was not considering the medical service in the Highlands and not only medical benefits under the Insurance Act?

Mr. MASTERMAN answered: I think the reference to the Committee was rather larger than the service under the Insurance Act. The inquiry is finished. The report is now being drafted and will be shortly presented.

Inclusive Medical Fees at Scottish Universities.

Mr. HOGGE asked the Secretary to the Treasury: (1) whether he would state what powers the Lords of the Treasury claimed to have in the internal management of the Scottish universities; and, if they did not make any claim, would he say how they justified their recent correspondence about the establishment of an inclusive fee for medicine in these universities; (2) why the Lords of the Treasury did not consult the Secretary for Scotland before they wrote refusing additional grants to Edinburgh University unless the University adopted an inclusive fee in medicine and the applied sciences; and (3) whether any representations had been pressed upon the Lords of the Treasury by the Carnegie Trust favourable to the adoption of an inclusive fee in medicine at the Scottish universities; and whether the proposed inclusive fee had been suggested solely or partly with a view to the convenience of that trust. —Mr. MASTERMAN replied: The Treasury make no claim to deal with the internal arrangements of the Scottish universities, but they are charged with the duty of laying down such principles as seem advisable as a condition of asking Parliament to vote grants of public money. The inclusive fee was adopted as a condition of the additional grant before the money was voted by Parliament in 1911–12 and 1912–13, and was accepted in principle by the Scottish universities. No representations were received from the Carnegie Trust in the matter. If any objection to the principle is felt by any body of Scottish opinion, I shall be glad to hear any representations they may wish to make on the subject.

Mr. HOGGE: Is the right honourable gentleman aware that the Universities of Glasgow and Edinburgh have sent representations against the inclusive fee?

Mr. MASTERMAN: No representations have reached me. Perhaps after the matter has been made public I may receive some.

Mr. PRINGLE: Has the right honourable gentleman not received a communication from the General Council of Glasgow University?

Mr. MASTERMAN: None has reached me personally.

Mr. F. WHYTE: Has there not been correspondence between the University of Edinburgh and the Treasury pointing out the extreme disapproval with which that University regards this course?

Mr. MASTERMAN: I must ask for notice of that question.

Dr. ADDISON: Has the Treasury been advised that the inclusive fee is the best way to avoid cramming?

Mr. MASTERMAN: I cannot enter into a controversy on that subject.

Reported Outbreak of Dengue Fever at Meerut.

Captain FABER asked the Secretary of State for War whether he could give the House any details regarding the recent outbreak of dengue fever at Meerut, by which several officers and some hundred men were attacked.—Mr. H. BAKER (who answered on behalf of the Under-Secretary of State for India) said: The Secretary of State for India is not in possession of any details.

Education Authorities and the Declining Birth-rate.

Mr. KING asked the President of the Board of Education whether any local authorities had pleaded the declining birth-rate as a ground for building or providing less elementary school accommodation than the usual percentage of population which had been taken to be as of school age; whether this plea had been in any case accepted by the Board; and whether cases within the last two years could be named where such contention had been admitted.—Mr. J. A. PEASE wrote in reply: One local education authority has recently mentioned in this connexion the decline of the birth-rate, but I am not aware of any cases in which the decision of the Board has been affected by this consideration.

Mr. KING also asked the right honourable gentleman whether he was aware that the declining birth-rate was now more than outweighed by the rapid decrease, especially during the last few years, of infantile mortality; and whether, under these circumstances, he would adopt a new formula for the proportion of the population for whom school places were to be provided by local authorities.—Mr. J. A. PEASE (in a written answer) replied: The number of school places to be provided by a local education authority is not now decided by any formula, but upon the best information which can be procured with regard to the actual needs of the locality. So far as recent statistics show there appears to be no stable proportion between the birth-rate and infantile mortality.

MONDAY, NOV. 25TH.

Maternity Benefit.

In reply to Mr. W. THORNE, Mr. MASTERMAN said that maternity benefit under the Insurance Act was payable in respect of a confinement and not in respect of the number of children born at it.

The Treatment of Consumptives in London.

Mr. ASTOR asked the President of the Local Government Board whether he would state how it was proposed to make the hundreds of empty beds in the Metropolitan Asylums Board available for the institutional treatment of consumptive insured persons in London.—Mr. BURNS replied: Negotiations are proceeding between the London County Council and the Metropolitan Asylums Board with a view to seeing if it is possible to utilise some of the accommodation of the latter body for the purpose in the question. Nothing has yet been settled, but I understand that the matter is being dealt with as expeditiously as possible.

Local Authorities and the Treatment of Tuberculosis.

Mr. ASTOR asked the President of the Local Government Board whether he would state how many complete schemes for detecting and treating tuberculosis had been submitted by local authorities, and how many had been approved up to date by the Board.—Mr. BURNS answered: Complete schemes have already been submitted by the councils of 60 counties and county boroughs, and the Board have approved of the main lines of 33 of these schemes. Schemes of a partial or temporary character have been submitted by 46 other such councils, and schemes for the provision of dispensaries have already been submitted by 16 metropolitan borough councils.

Beds in Sanatoria.

Mr. ASTOR asked the President of the Local Government Board whether he would state how many beds in sanatoria, as distinguished from beds in hospitals or other institutions, were now available for insured persons suffering from tuberculosis.—Mr. BURNS answered: The total number of beds in the sanatoria already approved by my Department is 2806.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, J. B., ET FILS, Paris.

Traitement d'Urgence des Maladies des Organes Génito-Urinaires. Par les Docteurs J. Fiolle, Professeur suppléant à l'École de Médecine de Marseille, Chirurgien des Hôpitaux, et P. Fiolle, Ancien Interne des Hôpitaux et de la Clinique Urologique de Marseille. Price Fr.6.

BUTTERWORTH AND CO., Bell-yard, Temple Bar, London; and at Sydney and Calcutta.

Butterworth's Workmen's Compensation Cases. Vol. V. (New Series.) Edited by His Honour Judge Ruegg, K.C., and Douglas Knocker, Barrister-at-Law, M.B. Lond. Price 7*s.* 6*d.* net; postage 5*d.* extra.

CABLE PRINTING AND PUBLISHING CO., LIMITED, Hatton House, 51, Great Queen-street, London, W.C.

The Amateur Gardener's Diary and Dictionary. Price 1*s.* net.

CHURCHILL, J. AND A., London.

Fatty Foods: Their Practical Examination. A Handbook for the Use of Analytical and Technical Chemists. By E. Richards Bolton, F.C.S., Consulting Analyst and Technical Chemist; and Cecil Revis, Chief Chemist, Messrs. Welford and Sons, Limited. Price 10*s.* 6*d.* net.

ENKE, FERDINAND, Stuttgart. BAUERMEISTER, F., 19, West Regent-street, Glasgow.

Abriss der Unfall- und Invaliditätskunde des Sehapparats. Von Dr. Ehrenfried Cramer in Cottbus. Price M.7, or 7*s.*

FISCHER GUSTAV, Jena.

Zur Morphologie der Nierensekretion unter physiologischen und pathologischen Bedingungen. Von Dr. Tatzuo Suzuki, Arzt in Japar. Mit einem Vorwort von L. Aschoff, Freiburg i.B. Price M.15.

Jahresbericht über die Ergebnisse der Tuberkuloseforschung, 1911. Von Dr. F. Köhler, Chefarzt der Heilstätte Holsterhausen bei Werden a.d.Ruhr. Abdruck aus dem Klinischen Jahrbuch herausgegeben von Dr. Naumann und Prof. Dr. M. Kirchner. Sechsundzwanzigster Band. Price M.6.

Geschlechtszellen und Körperzellen im Tierreich. Ein Vortrag von Dr. med. et phil. von Berenberg-Gossler, Privatdozent für Anatomie in Freiburg i.B. Price Pf.60. (Sammlung anatomischer und physiologischer Vorträge und Aufsätze. Herausgegeben von Prof. Dr. E. Gaupp und Prof. Dr. W. Trendelenburg. Heft 19. Zweiter Band, Heft 6.)

Vorlesungen über Infektion und Immunität. Von Dr. Paul Th. Müller, a.ö. Professor der Hygiene an der Universität Graz. Vierte erweiterte und vermehrte Auflage. Price, paper, M.8.; bound, M.9.

Lehrbuch der Zahnkrankheiten für Aerzte und Studierende. Von a.ö. Prof. Dr. B. Mayrhofer, Vorstand der K.K. Universitäts-Zahnklinik und Primararzt am Allgemeinen Krankenhause in Innsbruck. Price, paper, M.9; bound, M.10.

Vergleichend-diagnostischer Atlas der Hautkrankheiten und der Syphilide einschliessend die der Haut angrenzenden Schleimhäute. Von Dr. S. Ehrmann, a.ö. Professor der Dermatologie und Syphilidologie an der K.K. Universität, Vorstand der Dermatologischen Abteilung des K.K. Allgemeinen Krankenhauses zu Wien. Price M.50.

HEYWOOD, JOHN, LIMITED, Deansgate and Ridgefield, Manchester; and 20-26, Lamb's Conduit-street, London, W.C.

Electricity Made Plain. By George R. Peers, Associate Member of the Institution of Electrical Engineers. Price 1s. net.

HILTON AND CO., Calcutta.

A Treatise on Hygiene and Public Health, with Special Reference to the Tropics. By Birendra Nath Ghosh, L.M.S. Cal. Univ.; and Jahar Lal Das, L.M.S. Cal. Univ., Health Officer, Maniktala Municipality, Calcutta. With an Introduction by Colonel Kenneth Macleod (retd.). Price Rs.3.8, or 5s. net.

HIRSCHWALD, AUGUST, Unter den Linden, 60, Berlin, N.W.

Atlas der Operations-Anatomie und Operations-Pathologie der weiblichen Sexualorgane, mit besonderer Berücksichtigung des Ureterverlaufes und des Suspensions- und Stützapparates des Uterus. In 35 Tafeln. Von Dr. Wilhelm Liepmann, Privatdozent für Geburtshülfe und Gynäkologie an der Friedrich Wilhelm-Universität zu Berlin. Price M.24.

Der jetzige Stand der Krebsforschung Von Prof. Dr. Georg Klemperer, Direktor des Instituts für Krebsforschung der Königl. Charité und des Städt. Krankenhauses Moabit. (Referat erstattet in der Generalversammlung des Deutschen Zentralkomitees für Krebsforschung am 18 Mai, 1912.) Price M.2.

Der Kohlehydratstoffwechsel und die innere Sekretion. Darlegung ihrer beiderseitigen Beziehungen und neue Erklärung des Wesens hiermit zusammenhängender Stoffwechselkrankheiten. Für Forscher und Praktiker. Von Dr. Paul Höckendorf, Spezialarzt für Stoffwechselkrankheiten, Berlin-Charlottenburg. Price M.2.40.

Die Praxis der Salvarsanbehandlung. Von Marine-Oberstabsarzt Dr. Gennerich, Oberarzt der Krankenabteilung für Haut- und Geschlechtskrankheiten im Kaiserl. Marine-Lazarett Kiel-Wik. Price M.3.60.

Veröffentlichungen aus dem Gebiete des Militär-Sanitätswesens. Herausgegeben von der Medizinal-Abteilung des Königlich Preussischen Kriegsministeriums. Heft 53. Die Schussverletzungen des Schädels im Kriege." Beobachtungen' und Erfahrungen während des russisch-japanischen Krieges 1904-1905. Von Otto Holbeck, s. Z. älterer Arzt der "Eigenenen fliegenden Kolonne Ihrer Majestät der Kaiserin Maria Feodorowna." Price M.12.

HODDER AND STOUGHTON, London, New York, and Toronto.

Another Device. By Stephen Paget. Price 5s. net.

KIMPTON, HENRY, London. STENHOUSE, ALEXANDER, Glasgow.

The Wassermann Reaction. Its Technic and Practical Application in the Diagnosis of Syphilis. By John W. Marchildon, B.S., M.D. Price 6s. 6d. net.

KLINKHARDT, DR. WERNER, VERLAG VON, Leipzig.

Urologischer Jahresbericht. Einschliesslich der Erkrankungen des Männlichen Genitalapparates. Redigiert von Prof. Dr. A. Kollmann in Leipzig und Dr. S. Jacoby in Berlin. Literatur 1911. Price M.20.

LYNWOOD AND CO., LIMITED, 12, Paternoster-row, London, E.C.

Rag Time. A Collection of Military Poems Suitable for Recitation. By Lieut.-Col. J. D. F. Donegan, R.A.M.C. Price 1s. net.

MACLEHOSE, JAMES, AND SONS, Glasgow.

A Manual of Immunity. For Students and Practitioners. By Elizabeth T. Fraser, M.D. Glasg., late Assistant Bacteriologist, Glasgow Royal Infirmary; Belt Research Fellow. Price 5s. net.

MACMILLAN AND CO., LIMITED, St. Martin's-street, London.

Sleeping Sickness. By F. M. Sandwith, M.D., F.R.C.P. Lond., Gresham Professor of Physic; Lecturer at the London School of Tropical Medicine and at St. Thomas's Hospital Medical School; Senior Physician to the Albert Dock Hospital. Price 4d.

MALOINE, A., Paris.

Le Post-partum Normal. Premier Fascicule. Généralités; Organes génitaux. Par le Professeur Constantin Daniel (de Bucarest). Price not stated.

Le Diagnostic et le Traitement des Cancers Inopérables. A l'Usage des Praticiens. Par Joseph Thomas, Docteur en Médecine, Docteur ès-Sciences, Lauréat de l'Académie de Médecine. Price not stated.

MARLBOROUGH, E., AND CO., 51, Old Bailey, London, E.C.

French Grammar Self-Taught. By J. Laffitte, B.-ès-L., Principal French Master, City of London School. Price, in blue wrapper, 1s.; in red cloth, 1s. 6d.

French Self-Taught by the Natural Method. With Phonetic Pronunciation. Thimm's System. Enlarged edition. Revised by J. Laffitte, B.-ès-L., Principal French Master, City of London School. Price, in blue wrapper, 1s.; in red cloth, 1s. 6d.

PARTRIDGE, S. W., AND CO., LIMITED, 21 and 22, Old Bailey, London, E.C.

First Steps to Nursing. A Manual for Would-be Probationers. By Mabel H. Cave, Lady Superintendent and Matron of Westminster Hospital. With a Preface by Sir John Wolfe Barry, K.C.B. Price 1s. 2d.

RIVERTON PRESS, THE, Chicago.

The Blood of the Fathers. A Play in Four Acts. By G. Frank Lydston. Price not stated.

SAUNDERS (W. B.) COMPANY, Philadelphia and London.

Primary Studies for Nurses. A Text-book for First Year Pupil Nurses. By Charlotte A. Aikens. Second edition, thoroughly revised. Price 8s. net.

Clinical Studies for Nurses. A Text-book for Second and Third Year Pupil Nurses and a Handbook for all who are engaged in Caring for the Sick. By Charlotte A. Aikens. Second edition. Price 10s. net.

A Manual of Personal Hygiene. Proper Living upon a Physiologic Basis. By American Authors. Edited by Walter L. Pyle, A.M., M.D. Contributors: D. H. Bergey, M.D., J. W. Courtney, M.D., George Howard Fox, M.D., Joel E. Goldthwait, M.D., E. Fletcher Ingals, M.D., Walter L. Pyle, M.D., B. Alexander Randall, M.D., G. N. Stewart, M.D. Edin., Charles G. Stockton, M.D., Harvey W. Wiley, M.D. Fifth edition, revised and enlarged. Price 6s. 6d. net.

Nutritional Physiology. By Percy Goldthwait Stiles, Assistant Professor of Physiology in Simmons College, Boston. Price 6s. net.

A Text-book upon the Pathogenic Bacteria and Protozoa. For Students of Medicine and Physicians. By Joseph McFarland, M.D., Professor of Pathology and Bacteriology in the Medico-Chirurgical College, Philadelphia. Seventh edition, thoroughly revised. Price 15s. net.

A Text-book of General Bacteriology. By Edwin O. Jordan, Ph.D., Professor of Bacteriology in the University of Chicago and in Rush Medical College. Third edition, thoroughly revised. Price 13s. net.

A Text-book on the Practice of Gynecology. For Practitioners and Students. By William Easterly Ashton, M.D., LL.D., Professor of Gynecology in the Medico-Chirurgical College, Philadelphia. With 1050 new line drawings illustrating the Text by John V. Altenedor. Fifth edition, thoroughly revised. Price 21s. 6d. net.

A Text-book of Obstetrics. By Barton Cooke Hirst, M.D., Professor of Obstetrics in the University of Pennsylvania. Seventh edition, revised and enlarged. Price 21s. net.

SCIENTIFIC PRESS, LIMITED, London.

Massage Manual. Intended for the Use of Students for the I.S.T.M. Examination. By M. Pireau. Edited and revised by S. Gurney Champion, M.D. Edin., M.B., C.M., &c. Part I.: Massage. Part II.: Anatomy and Physiology. Price 2s. 6d. net.

Ophthalmic Nursing. By Sydney Stephenson, M.B., C.M., F.R.C.S. Edin., D.O. Oxon., Editor of the "Ophthalmoscope." Ophthalmic Surgeon to Queen Charlotte's Hospital. Third edition, revised and enlarged. Price 3s. 6d. net.

SPRINGER, JULIUS, Berlin.

Diagnostik der Farbensinnstörungen. Eine Einführung für Sanitätsoffiziere, beamtete Aerzte, Bahnärzte und Studierende. Von Professor Dr. Stargardt, Privatdozent an der Universität; und Professor Dr. Oloff, Marine-Oberstabsarzt zu Kiel. Price, bound, M.1.80.

Die Puerperale Wundinfektion. Von Dr. Albert Hamm, Oberarzt an der Universitäts-Frauenklinik in Strassburg i.E. Price M.6.

STEINHEIL, G., Paris.

La Tuberculose Pulmonaire: Maladie évitable, Maladie curable. Par le Docteur R. Brunon, Professeur de Clinique Médicale, Directeur de l'Ecole de Médecine de Rouen. Price, boards, Fr.10.

THIEME, GEORG, Leipzig.

Monographien über die Zeugung beim Menschen. Von Dr med. Hermann Rohleder, Sexualarzt in Leipzig. Band II.: Die Zeugung unter Blutsverwandten. Price, paper, M.4.20; bound, M.5.

UNIVERSITY OF LONDON PRESS, LIMITED, London. HODDER AND STOUGHTON, Warwick-square, London, E.C. (Publishers to the University of London Press, Limited).

Health Resorts of the British Islands. Edited by Neville Wood, M.D. Price 10s. 6d. net.

UNIVERSITY TUTORIAL PRESS, LIMITED, Cambridge. W. B. CLIVE, 25, High-street, New Oxford-street, London, W.C.

The London University Guide, 1913. Containing the Regulations for Examinations to be held in 1913 and 1914. Price not stated.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

BEAN, K. D., M.B., Ch.B. Vict., has been appointed Junior House Surgeon at the Manchester Royal Infirmary.

BEDALE, F. S., M.R.C.S., L.R.C.P., has been appointed House Surgeon to Special Departments at the Manchester Royal Infirmary.

CLEMINSON, F. J., M.C. Cantab., F.R.C.S. Eng., has been appointed Clinical Assistant to the Ear and Throat Department at University College Hospital.

CROWE, H. NEVILLE, M.B., Ch.B. Birm., M.R.C.S., L.R.C.P. Lond., has been appointed Honorary Physician to the General Infirmary, Worcester.

DINGLEY, L. A., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon at University College Hospital.

DUGGAN, N., M.B., Ch.B. Vict., has been appointed Senior House Surgeon at the Manchester Royal Infirmary.

GOW, JOHN, M.B., Ch.B. Vict., has been reappointed Accident Room House Surgeon at the Manchester Royal Infirmary.

HEY, W. H., F.R.C.S. Eng., has been reappointed Assistant Surgical Officer to the Manchester Royal Infirmary.

HUNT, Miss M., M.D. Lond., D.P.H., has been appointed Junior Clinical Assistant to the Gynæcological Department of the Royal Free Hospital.

LEWIS, T., M.D. Lond., M.R.C.P. Lond., has been appointed Assistant Physician to University College Hospital.

MATTHEWS, N., M.B., Ch.B. Vict., has been appointed Senior House Surgeon at the Manchester Royal Infirmary.

MORRIS, C. W., M.R.C.S., L.R.C.P. Lond., has been appointed Registrar of Anæsthetics at University College Hospital.

OLIVER, T. H., B.A. Cantab., M.B., Ch.B. Vict., has been appointed House Physician at the Manchester Royal Infirmary.

PERKINS, HERBERT W., F.R.C.S. Eng., D.P.H. Lond., has been appointed Pathologist and Bacteriologist to the Hampstead General and North-West London Hospital.

SAMUEL, H., M.R.C.S., L.R.C.P. Lond., has been appointed Clinical Assistant to the Skin Department at University College Hospital.

STEWART, R. P., M.B., Ch.B. Vict., has been appointed Junior House Surgeon at the Manchester Royal Infirmary.

REID, W. J., has been appointed Director of the Cancer Research Laboratory at the Manchester Royal Infirmary.

VINING, C. WILFRED, M.D., B.S. Lond., M.R.C.P. Lond., D.P.H., has been appointed Honorary Physician to the Leeds Public Dispensary.

WILKINSON, A. G., M.B., Ch.B. Vict., has been appointed House Physician at the Manchester Royal Infirmary.

WILLIS, H. B., L.M.S.S.A. Lond., has been appointed House Physician at the Manchester Royal Infirmary.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BARNET, CLARE HALL SANATORIUM, South Mimms.—Assistant Resident Medical Officer. Salary £120 per annum, with board, lodging, and laundry.

BIRKENHEAD UNION INFIRMARY AND SANATORIUM.—Junior Resident Assistant Medical Officer (female). Salary £110 per annum, with board, washing, and apartments.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES.—Clinical Assistant for three months. Salary at rate of 52 guineas per annum.

BIRMINGHAM, ROMSLEY HILL SANATORIUM FOR CONSUMPTIVES.—Medical Superintendent. Salary £350, with board and residence.

BIRMINGHAM, SALTERLEY GRANGE SANATORIUM FOR CONSUMPTION, near Cheltenham.—Resident Medical Officer. Salary £300 per annum, with board, &c.

BODMIN, CORNWALL COUNTY ASYLUM.—Third Assistant Medical Officer and Pathologist. Salary £160 per annum, with quarters, board, laundry, and attendance.

BOURNEMOUTH, ROYAL NATIONAL SANATORIUM FOR CONSUMPTION AND DISEASES OF THE CHEST.—Resident Medical Officer. Salary £12 per month, with board, residence, and washing.

BRAINTREE, UNITED DISTRICTS OF BRAINTREE, DUNMOW, AND HALSTEAD.—Medical Officer of Health. Salary £500 per annum.

BRIGHTON ISOLATION HOSPITAL.—Junior Resident Medical Officer for six months. Salary at rate of £100 per annum, with board.

BRIGHTON, ROYAL SUSSEX COUNTY HOSPITAL.—Assistant House Surgeon, unmarried. Salary £80 per annum, with apartments, board, and laundry.

BRISTOL ROYAL INFIRMARY.—Resident Casualty Officer for five months. Salary at rate of £50 per annum, with board, apartments, and laundry.

CARLISLE NON-PROVIDENT DISPENSARY.—Resident Medical Officer. Salary £150 per annum, with apartments.

CARMARTHEN, JOINT COUNTIES ASYLUM.—Second Assistant Medical Officer. Salary £160 per annum, with board, lodging, washing, &c.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Clinical Assistant in Out-patient Department.

COBHAM, SURREY, SCHIFF HOME OF RECOVERY FOR SURGICAL SEMI-CONVALESCENTS.—Resident Surgical Officer for six months. Salary £75, with board, lodging, and washing.

CORNWALL COUNTY COUNCIL.—Tuberculosis Medical Officer. Salary £500 per annum.

COVENTRY AND WARWICKSHIRE HOSPITAL.—Junior House Surgeon. Salary £90 per annum, with rooms, board, washing, and attendance.

DORCHESTER, DORSET COUNTY HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board and residence.

DUMFRIES, CRICHTON ROYAL INSTITUTION.—Second Assistant Physician, unmarried. Salary £200 per annum, with apartments, board, and laundry.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—Medical Officer to the Casualty Department for six months. Salary at rate of £100 per annum, with luncheon and tea. Also House Physician. Salary at rate of £75 per annum, with board, residence, and laundry.

HALIFAX ROYAL INFIRMARY.—Third House Surgeon, unmarried. Salary £80 per annum, with residence, board, and washing.

HAMPSTEAD, BOROUGH OF.—Tuberculosis Medical Officer. Salary £400 per annum.

HASTINGS, EAST SUSSEX HOSPITAL.—Assistant House Surgeon. Salary at rate of £70 per annum, with residence, board, and washing.

HEREFORD COUNTY AND CITY ASYLUM.—Assistant Medical Officer, unmarried. Salary £150 per annum, with board, lodging, washing, &c.

HEREFORD, HEREFORDSHIRE GENERAL HOSPITAL.—House Surgeon, unmarried, for six months. Salary at rate of £120 per annum, with board, apartments, and washing.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.—House Surgeon, unmarried, for six months. Salary £30, with board, residence, and washing allowance.

ITALIAN HOSPITAL, Queen-square, W.C.—House Surgeon for six months. Salary £60 per annum, with board and residence.

LEEDS HOSPITAL FOR WOMEN AND CHILDREN.—House Surgeon for six months. Salary at rate of £50 per annum, with board.

LEICESTER, LEICESTERSHIRE AND RUTLAND ASYLUM.—Junior Assistant Medical Officer, unmarried. Salary £150 per annum, with board, residence, and laundry.

LINCOLN COUNTY HOSPITAL.—Junior House Surgeon, unmarried, for six months. Salary at rate of £100 per annum, with board, residence, and washing.

LIVERPOOL EDUCATION COMMITTEE.—Medical Men for the Treatment of cases of Defective Vision and Ringworm. Salary 75 guineas per annum each.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Resident Medical Officer. Salary £200 per annum, with board, lodging, and washing.

LOWESTOFT HOSPITAL.—House Surgeon, unmarried. Salary at rate of £100 per annum, with board, residence, and laundry.

MAIDSTONE, KENT COUNTY ASYLUM. — Fourth Assistant Medical Officer, unmarried. Salary £200 to £220 per annum, with quarters, attendance, washing, &c.

MANCHESTER, HULME DISPENSARY, Dale-street, Stretford-road.—House Surgeon. Salary £160 per annum, with apartments, attendance, coal, and gas.

MANCHESTER NORTHERN HOSPITAL FOR WOMEN AND CHILDREN, Park-place, Cheetham Hill-road.—Honorary Assistant Surgeon for Women.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer, unmarried. Salary £150 per annum, with board and residence.

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Hampstead.—House Physician. Salary £75 per annum, with board, residence, and washing.

NESTING AND LUNNASTING, AND PARISH OF NESTING, &c.—Medical Officer. Salary £50 per annum.

NORFOLK EDUCATION COMMITTEE.—Assistant Medical Officer. Salary £250 per annum.

NORWOOD SCHOOL TREATMENT CENTRE (L.C.C.).—Practitioners for Anæsthetics; Nose, Throat, and Ear; Ophthalmic (Refractions); Ringworm (X Ray Treatment); Minor Ailments. Salary at rate of £50 per annum.

NOTTINGHAM GENERAL HOSPITAL.—Assistant House Surgeon. Salary £100 per annum, with board, residence, and laundry.

PLYMOUTH, SOUTH DEVON AND EAST CORNWALL HOSPITAL.—House Physician for six months. Salary £75 per annum, with board, residence, and washing.

ROCHDALE INFIRMARY.—Junior House Surgeon, unmarried. Salary £80 per annum, with board, residence, and laundry.

ROYAL COLLEGE OF PHYSICIANS.—Milroy Lecturer.

ROYAL EAR HOSPITAL, Soho.—Honorary Assistant Anæsthetist. Also House Surgeon. Salary £40 per annum.

ROYAL EYE HOSPITAL, Southwark, S.E.—Junior House Surgeon for six months. Salary £50 per annum, with board and residence. Also Clinical Assistants.

ROYAL FREE HOSPITAL, Gray's Inn-road, W.C.—Surgical Registrar (female).

ROYAL NATIONAL ORTHOPÆDIC HOSPITAL.—Two Honorary Anæsthetists. Salary 20 guineas each.

SEAMEN'S HOSPITAL SOCIETY, DREADNOUGHT HOSPITAL, Greenwich.—Medical Registrar. Salary £100 per annum, with luncheon.

UNIVERSITY COLLEGE HOSPITAL, Gower-street, W.C.—Obstetric Registrar.

UNIVERSITY OF LONDON.—Examiners.

WAKEFIELD, WEST RIDING OF YORKSHIRE.—Tuberculosis Officer. Salary £400 per annum.

WELLS, SOMERSET AND BATH ASYLUM.—Second Assistant Medical Officer, unmarried. Salary £135 per annum, with board, lodging, washing, and attendance.

WEST BROMWICH AND DISTRICT HOSPITAL.—Assistant Resident House Surgeon and Anæsthetist, unmarried. Salary £75 per annum, with board, residence, and washing.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Physician for six months. Board, lodging, and laundry provided.

WESTMINSTER HOSPITAL MEDICAL SCHOOL, Caxton-street, S.W.—Lecturer on Tropical Diseases.

WISBECH, NORTH CAMBRIDGESHIRE HOSPITAL.—Resident Medical Officer. Salary £150 per annum.

WORCESTER COUNTY AND CITY ASYLUM, Powick.—Junior Assistant Medical Officer, unmarried. Salary £160 per annum, with board, apartments, washing, and attendance.

Births, Marriages, and Deaths.

BIRTHS.

GAUNTLETT.—On Nov. 17th, at Bloxham, Oxon., the wife of Harry Leon Gauntlett, M.R.C.S., L.R.C.P., A.K.C., of a daughter.

SMALLEY.—On Nov. 17th, at Suva, Fiji Islands, the wife of James Thornton Smalley, M.R.C.S. Eng., L.R.C.P. Lond., of a son.

MARRIAGES.

GARDINER—HARE.—On Nov. 19th, at St. George's, Hanover-square, Harold Gardiner, M.B., B.S., to Constance Mabel, only daughter of Henry T. Hare, F.R.I.B.A., and Mrs. Hare.

DEATHS.

SPARKE.—On Nov. 22nd, at West Hill, Mansfield, Notts, George Whitefield Sparke, M.R.C.S., L.R.C.P., in the 84th year of his age.

STEDMAN.—On Nov. 25th, at Leighton Buzzard, Frederick Stedman, Surgeon, aged 65 years.

Notes, Short Comments, and Answers to Correspondents.

INSTINCTS AND PROBABILITIES.

THERE is now running at the Duke of York's Theatre a short three-act play called *Instinct*, which depends for its dramatic climax upon the struggle in a surgeon's mind between his natural impulse to kill his wife's supposed paramour and his professional instinct for saving human life—even that of his rival. According to stage ideals the play is coherent, and it leads with unflagging interest up to its one great "situation," upon which the final curtain falls with commendable speed. As might be expected with a play which from beginning to end violates all the technical probabilities, the audience is quite convinced that it is the real thing. The captious medical critic will, of course, find it easy to pull the whole piece to bits and mock the playwright, the actors, and the audience for supposing that medical men ever did or said such absurdities. But we understand that the real thing on the stage never professes to be a faithful picture of real life as this is known to the technical expert. Therefore the medical superior person must be a little indulgent when he turns to *Instinct* for an evening's entertainment. Moreover, the scene is laid in the United States, and everybody knows that medical and surgical practice over there does not exactly correspond to the standard set by our insular prejudices. Although the hero (a surgeon) is a Fellow of our own Royal Society and speaks good English even in his wildest moments, he is an American, and although his brother (a physician) reads THE LANCET even in his wildest moments, he too is an American; hence we must make allowances. Why should not a surgeon's consulting-room lead direct into his wife's bedroom, even if she is haunted with the thought of his great blood-stained hands always cutting and tearing other people for a livelihood? After all, the theatrical profession for aught we know may consider that *Rosalind*, the charming little piece by Barrie which follows *Instinct*, is a grotesque travesty in so far as it attempts to reveal the mind and behaviour of an actress of 40 "and a bittock." It will be a bad day for us all when every play with what is called a strong medical interest has to be passed beforehand by a dramatic committee of the General Medical Council.

CRÊME DE MENTHE AND ACAPNIA.

To the Editor of THE LANCET.

SIR,—In THE LANCET of to-day (p. 1481) the writer of the amusing notice of my two papers evidently suspects me of a design "épater les médecins bourgeois." But he might have noted that the advice to take crême de menthe was only given to a professional audience in the strictest confidence. Those who are dubious as to the existence of any link between angina pectoris and "flatulence" may care to read the report of the debate, held early in October, at the Académie de Médecine de Paris, and those who are sceptical as to "gas secretion" may care to read Roger's lecture, "On the Functions of the Lung," published in *La Presse Médicale* a fortnight ago.

I am, Sir, yours faithfully,

Welbeck-street, W., Nov. 23rd, 1912. F. G. CROOKSHANK.

HEALTH AND SANITATION IN NORTHERN NIGERIA.

A REPORT on the Blue-book of Northern Nigeria for the year 1911 has been received at the Colonial Office and presented to Parliament. It states that the average number of Europeans resident in the Protectorate during the year, including officials and non-officials, but excluding those engaged on the Lagos Government railway, was 616 males and 25 females—a total of 641. The native population is estimated at 9,296,000—4,033,743 males and 5,235,257 females. There is an enormous variation in the density of the population from 4·51 per square mile in Kontagoro to 500 per square mile in parts of Kano province. There were 13 deaths amongst the European population, in addition to one amongst the Europeans employed on the railway extension. The number of European officials invalided during the year was 40. As in previous years, malarial fever accounted for a large number of the cases of ill-health. There were 5 fatal cases of blackwater fever, as compared with 2 in 1910. Amongst natives there were 80 cases of small-pox treated, with 14 deaths. One European had a severe attack, but recovered. This disease, which assumes an epidemic form annually, is very prevalent throughout the Protectorate, but at present it is not possible to give accurate statistics of it. There were 5494 vaccinations performed during the year, of which 3879 were returned as successful. There is, as was only to be expected, a great prejudice against vaccination on the part of the natives, but there are indications that this prejudice is being broken down gradually.

The number of Europeans admitted to the hospital at Zungero during 1911 was 54, and there was 1 death; 811 natives were admitted, and among these there were 16 deaths. To the hospital at Lokoja 108 Europeans were admitted and 883 natives; there were 2 deaths among the former and 46 among the latter. To the temporary hospital provided at Baro for the construction staff of the Baro-Kano and Bauchi light railways there were 74 admissions, with only 1 death. European nursing sisters were in attendance at the Zungero and Lokoja hospitals and at the temporary hospital at Baro. The total number of out-patients treated during the year, as compiled from returns received from out stations, were: Europeans 686, with 3 deaths; natives 21,940, with 199 deaths.

The work of the Sanitary Department is entirely advisory. The staff consists of two European officers, who are the advisers of the executive in all matters affecting sanitation. Efforts are being made to impress on the native chiefs the need for proper sanitation in their towns. It is in the Northern States that the chiefs take most kindly to these efforts, and in Kano City particularly great improvements have been effected. With regard to the Southern and pagan provinces, any improvement of the sanitary surroundings of the natives can only be brought about after much time and patience have been spent. Efforts are being made, where possible, to clear the ground in the neighbourhood of towns and roads in order to reduce the number of cases of trypanosomiasis. There were 27 cases—2 fatal—of this disease brought to notice amongst the natives during 1911, and doubtless there were many more cases which were not notified. Attempts are being made effectively to segregate cases of leprosy and sleeping-sickness, but it is not an easy matter to persuade the natives to consent to the necessary isolation from their friends. At Lokoja, Baro, and Zungero, in addition to the regular oiling of puddles and water holes which cannot either be drained or filled in, the stations and native towns are visited by the local health officers and sanitary inspectors, who pay special attention to moveable receptacles, inside and outside of the compounds, which hold or are liable to hold water. A certain amount of elementary sanitation is being taught at the Government schools.

The highest shade temperature recorded during the year was 119° F. at Geidam on March 28th, and the lowest 43° F. at Kano on Dec. 30th. The highest mean shade temperature was 83·8° F. recorded at Baro, and the lowest 73·0° F. at Naraguta. The greatest total rainfall was 57·84 inches recorded at Naraguta in the Central Province, and the lowest 10·46 inches at Geidam in Bornu province.

"CAST" MEDICAL LITERATURE.

To the Editor of THE LANCET.

SIR,—Through your kindness in inserting an appeal for "cast" copies of THE LANCET and other valuable medical journals, members of the profession working in isolation and under trying circumstances in many parts of the globe have received much greatly valued help. Lately there has been a falling off in the supply. May I again mention the need? Only up-to-date literature is wanted, and if avoidable, no sent anonymously. An address will be given on application to me.

I am, Sir, yours faithfully,

Bacton, Wokingham, Berks. (Miss) B. GAMBIER PARRY.

THE ECONOCOOKER.

RECENTLY a demonstration took place at the residence of Mr. Waggett of a new cooking apparatus called the "Econocooker." A number of people were present, and amongst these we noticed several hospital physicians and members of hospital administrative staffs. Mr. Waggett, in addressing the guests, said he saw this new method of cooking a short while ago in the Pyrenees, and he thought there were great possibilities for its uses. He remarked that the principle adopted was really most primitive, at least it was very similar to that of ancient races, who, having made a hole in the ground and put a fire therein, placed the meat to be cooked in it, afterwards covering it with earth. The apparatus is based on two essential principles: firstly, the giving of a certain amount of heat to a piece of cast iron, which heat performs the cooking; secondly, the prevention of radiation by means of an insulated cover. All forms of cooking are possible, and at this demonstration a chicken was roasted, cakes and bread were baked, steaming and stewing of meat and vegetables were performed. All these were afterwards tasted and pronounced excellent.

In addition to the scientific perfection of this cooking—it being admitted that it gives an equal cooking to all parts, at the same time retaining all the nutriment and destroying none, which appealed to the majority of the audience—it was also proved that the apparatus produces great economy of labour and of money. In the former case it was shown that during all the time of cooking no supervision was necessary, the cooking being entirely automatic, and in the latter it was obvious that no fuel was expended. A point of especial importance was that, owing to the gradual diminution of the temperature and also to the absence of evaporation, the meal could be allowed to remain in the apparatus for as much as two hours after the regular dinner hour, without overcooking or any deterioration of the food.

The demonstration was conducted by Monsieur Emile Kiechlé, of Vernet-les-Bains, assisted by Mr. H. S. Corder, of Newcastle, the British representative of the makers. Monsieur Escoiffier, the chef of the Carlton Hotel, was also present, and expressed his entire approval of this method of cooking. It was stated that the Econocooker was now on sale at the principal London stores.

HEALTH AND SANITATION IN SIERRA LEONE.

A REPORT on the Blue-book of Sierra Leone for the year 1911, prepared by the Acting Colonial Secretary, Mr. E. E. Evelyn, I.S.O., has been presented to Parliament. It states that Sierra Leone, situated on the West Coast of Africa, consists of two parts—(1) the Colony, and (2) the Protectorate—and has a coast line of 210 miles, extending from the territory of the Republic of Liberia on the south-east, where the Mano River forms the boundary, as far as Kiragba on the north-west. It is bounded on the north and north-east by French Guinea, on the south-east by Liberia, and on the west by the Atlantic Ocean. The estimated area of the Colony and Protectorate is about 31,000 square miles. According to the Census of 1911 the population of the Colony amounted to 75,572 (41,001 males and 34,571 females), while that of the Protectorate is estimated at 1,327,560, including 3426 non-natives. The principles underlying the administration of the Protectorate have been to recognise, as between natives, the use of native customary law; to preserve the authority of the native rulers; to strengthen the just and lawful exercise of that authority, while preventing all acts of aggression; and to grant to all non-natives in the Protectorate the protection of the English law to which they had formerly been accustomed. Registration of births and deaths is not compulsory in the Protectorate, nor is it enforced in all parts of the colony. In Freetown (the capital), however, it is obligatory. During the year 1911 1116 births and 1314 deaths were registered, of which 501 and 740 respectively took place in Freetown. These returns show a death-rate of 17 and a birth-rate of 14 per 1000 respectively. The ten chief causes of death were in the order given as follows: (1) diseases of the digestive system; (2) diseases of the nervous system; (3) diseases of the respiratory system; (4) debility; (5) fever (malarial); (6) diseases of the circulatory system; (7) rheumatism; (8) premature birth; (9) diseases of the urinary system; and (10) tubercle. It must, however, be noted that only about 25 per cent. of the deaths registered are certified to by medical practitioners. There was an improvement during the year in the health of the European population, which consists of about 192 officials, 374 military, and 343 non-officials—total 909. There were amongst the Europeans 3 deaths, 2 of which were due to blackwater fever and heart disease respectively, while the other was accidental. Thirty-six Europeans were invalided, of whom 17 were suffering from malaria and 1 from blackwater fever. Ninety European officials were placed on the sick list for a total number of 532 days, while 5 were sent to England invalided. There were no cases of yellow fever or trypanosomiasis during the year, nor any epidemic outbreak of small-pox. Vaccination was carried on as regularly as possible, both in the Colony and Protectorate; 8432 persons were vaccinated—5199 (61 per cent.) with known success. The returns of malaria show that 2208 cases were treated, as compared with 2472 in 1910. In Freetown 151 fewer cases were recorded than in the year previous, a decrease which affords some testimony as to the success of the anti-mosquito measures adopted, which is further confirmed by a decrease of 54 in the number of deaths from the disease. The infantile death-rate in Freetown was 310 per 1000—a decrease of 58 on the rate for 1910. The regular work of the sanitary department was diligently carried on during the year, special attention being devoted to the extermination of mosquitoes. Consequent on the routine inspections of collections of water with a view to the discovery of larvæ, 1350 prosecutions were instituted under the Public Health Ordinance, 1910, and in 1084 cases convictions were secured. In Freetown the free distribution of quinine was extended by an arrangement under which the Princess Christian Mission Hospital Dispensary is supplied with large quantities free of charge for issue particularly in the eastern part of Freetown, where that institution is situated. The inhabitants of Freetown show marked appreciation of the free supplies of broken stone provided, at Professor Simpson's suggestion, for use in filling up pools and other hollows. Experiments are in hand to make trial of the usefulness of "millions" fish as larvæ-eaters. They may prove useful in pools, but larvæ-eating fish appear to avoid places where laundry work is habitually carried on, owing to the soapy condition of the water ensuing therefrom. It is believed that, as a result of the comprehensive and sustained campaign against mosquitoes, their number in Freetown has been sensibly diminished. 1918 rats and mice were brought to the Colonial Hospital by the public and paid for at the rate of one penny each. The usual sanitary inspections throughout the Colony were efficiently conducted during the year. In the Protectorate, where the sanitation scheme is controlled by the District Commissioners with the assistance of the medical officers, and is promoted by suasion and encouragement, a gratifying advance is recorded. One indication of this is discernible in the establishment, by a few of the native chiefs, of definite segregated cemeteries. Some progress has also been made in the matter of expelling cattle from the towns and villages, while there are also cases of entirely new towns having been built by chiefs on regular lines in the immediate vicinity of old ones, with a view to abandoning the latter eventually or at least to remodelling them substantially. It is further favourable augury that many chiefs are now beginning to take a practical interest in the planning and making of roads and streets. Presentation swords and certificates have, as usual, been awarded to those chiefs whose zeal in promoting the sanitary improvement of their chiefdoms has appeared to merit recognition. At Freetown in 1911 the mean shade temperature was 80·4° F., the highest point recorded being 92° in March, and the lowest 70·8° in October The rainfall measured 146·59 inches, August being the wettest month with 36·08 inches, while the driest was January with 0·01 inch. The maximum humidity was 90° in August and the minimum 75° in April.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY, Burlington House, London, W.

THURSDAY.—Mr. C. G. Douglas, Dr. J. S. Haldane, Mr. Y. Henderson, and Mr. E. C. Schneider: Physiological Observations made on Pike's Peak, Colorado, with Special Reference to Adaptation to Low Barometric Pressures.—Muriel Robertson: Notes on the Life-history of Trypanosoma Gambiense, with a Brief Reference to the Cycles of Trypanosoma Nanum and Trypanosoma Pecorum in Glossina Palpalis (communicated by Sir J. R. Bradford, K.C.M.G., secretary to the Royal Society).—Dr. J. H. Ashworth and Dr. T. Rettie: On a Gregarine-Steinina Rotundata nov. sp., present in the Mid-gut of Bird Fleas of the Genus Ceratophyllus (communicated by Prof. J. C. Ewart).—Prof. G. Dreyer, Mr. W. Ray, and Mr. E. W. A. Walker: (1) The Size of the Aorta in Warm-blooded Animals and its Relationship to the Body Weight and to the Surface Area expressed in a Formula (communicated by Prof. F. Gotch); (2) The Size of the Trachea in Warm-blooded Animals and its Relationship to the Weight, the Surface Area, the Blood Volume, and the Size of the Aorta (communicated by Prof. F. Gotch).—Studies of the Processes Operative in Solutions:—XX., Mr. E. E. Walker: The Conversion of Ammonic Cyanate into Urea, especially as Influenced by Alcohols (communicated by Dr. H. E. Armstrong); XXII., Mr. F. P. Worley: The Hydrolysis of Cane Sugar by Dilute Acids (communicated by Dr. H. E. Armstrong); XXIII., Mr. F. P. Worley: The Hydrolysis of Cane Sugar by Sulphuric Acid, with a Note on Improvements in Polarimetric Apparatus (communicated by Dr. H. E. Armstrong); XXIV., Mr. F. P. Worley: The Hydrolysis of Methylic Acetate by Acids (communicated by Dr. H. E. Armstrong); XXV., Dr. H. E. Armstrong and Mr. F. P. Worley: The Nature of Hydrolytic Process.—Dr. R. T. Beatty: The Direct Production of Characteristic Roentgen Radiations by Cathode Particles (communicated by Sir J. T. Thomson, O.M.).—Mr. A. S. Russell: The Penetrating Power of the γ Rays from Radium C (communicated by Prof. E. Rutherford).—Dr. H. S. Allen: The Photo-electric Behaviour of Iron in the Active and Passive State (communicated by Prof. C. G. Barkla).—Mr. H. B. Keene: A Determination of the Radiation Constant (communicated by Prof. J. H. Poynting).

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street, W.

TUESDAY.

SECTION OF PATHOLOGY (Hon. Secretaries—H. R. Dean, Gordon W. Goodhart): at 8.30 P.M.

Laboratory Meeting at the National Hospital, Queen-square, W.C.

Dr. H. MacLean and Dr. A. Cooper: Demonstration on Beriberi in Pigeons.

Mr. J. McDonagh: The Complete Life Cycle of the Parasite of Syphilis.

Dr. F. E. Batten and Dr. G. Holmes: The Pathological Examination of a Case of Werdnig-Hoffmann Paralysis.

Dr. Farquhar Buzzard: The Pathological Examination of a Case of Acute Poliomyelitis.

Dr. S. A. K. Wilson: Two Rare Tumours of the Third Ventricle.

Other Sections and Preparations of Neurological interest will be shown.

WEDNESDAY.

SECTION OF OPHTHALMOLOGY (Hon. Secretaries—J. Herbert Parsons, Leslie Paton): at 8.30 P.M.

Discussion:

The Physiology of the Intraocular Pressure. Opened by Dr. Leonard Hill, F.R.S., and Professor Starling, F.R.S.

Mr. Priestley Smith, Mr. Martin Flack, Mr. Thomson Henderson, Mr. J. H. Parsons, and others will take part in the discussion.

(Members of other Sections are cordially invited to attend this Meeting.)

THURSDAY.

SECTION OF OBSTETRICS AND GYNÆCOLOGY (Hon. Secretaries—W. W. H. Tate, T. W. Eden): at 8 P.M.

Specimens:

Dr. Handfield-Jones: Two Cases of Fibromyoma Uteri undergoing Sarcomatous Degeneration.

Dr. Beckwith Whitehouse: (1) Early Sarcoma of Uterus; (2) Fibromyoma showing Unusual Characters.

Dr. Williamson: Gestation in a Fallopian Tube stretched over a Broad Ligament Cyst.

Dr. Gordon Luker: Rupture of a Hæmorrhagic Corpus Luteum with a Broad Ligament Cyst.

Short Communication:

Dr. Florence Willey: Case of Hydrocephalus Complicated by Eclampsia, Fibroids, and a Contraction Ring.

Paper:
Dr. Clifford White: The Contraction Ring as a Cause of Dystocia, with Description of Specimen removed during Labour.

FRIDAY.
SECTION OF LARYNGOLOGY (Hon. Secretaries—Dan McKenzie, E. A. Peters): at 4.30 P.M.
Cases, Specimens, and Instruments
Will be shown by Mr. C. W. M. Hope, Dr. Walter G. Howarth, Dr. Harold Whale, Dr. P. Watson-Williams, Dr. D. R. Paterson, Mr. J. F. O'Malley, and others.

SECTION ON ANÆSTHETICS (Hon. Secretaries—H. J. Scharlieb, C.M.G., H. E. G. Boyle): at 8.30 P.M.
Mrs. Dickinson Berry: Notes on Anæsthetics in America, with Special Reference to the Practice at the Mayo Clinic.

ROYAL SOCIETY OF ARTS, John-street, Adelphi, W.C.
MONDAY.—8 P.M., Mr. C. R. Darling: Methods of Economising Heat. (Cantor Lecture.)
WEDNESDAY.—8 P.M., Mr. A. Zimmermann: The Manufacture of Sugar from Wood and its Economic Importance.

RÖNTGEN SOCIETY, Cancer Hospital (Free), Fulham-road, S.W.
TUESDAY.—8.15 P.M., General Meeting. Visit to the new Electrical and Radio-Therapeutic Department, the Physical Laboratories and the Laboratories of the Research Institute at the Cancer Hospital, Brompton. The Apparatus will be shown and Demonstrations given of Single Impulse Exposures, Diathermy, Electro-Coagulation, Radium Technique, &c.

NORTH-EAST LONDON CLINICAL SOCIETY, Prince of Wales's Hospital, Tottenham, N.
THURSDAY.—4.15 P.M., Clinical Meeting.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C.
THURSDAY.—5 P.M., Mr. C. W. Mansell Moullin: The Biology of Tumours. (Bradshaw Lecture).

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.
MONDAY.—4 P.M., Dr. W. Fox: Clinique (Skin). 5.15 P.M., Lecture:—Mr. A. E. J. Barker: Regarding Drainage after Laparotomy for Inflammatory Conditions.
TUESDAY.—4 P.M., Dr. H. L. Tidy: Clinique (Medical). 5.15 P.M., Lecture:—Dr. J. C. McClure: Gastric Atony and Neurasthenia.
WEDNESDAY.—4 P.M., Mr. T. P. Legg: Clinique (Surgical). 5.15 P.M., Lecture:—Mr. R. D. Maxwell: Obstetric Emergencies.
THURSDAY.—4 P.M., Dr. G. A. Sutherland: Clinique (Medical). 5.15 P.M., Dr. A. F. Tredgold: The Diagnosis of Mental Defect.
FRIDAY.—4 P.M., Mr. J. Cunningham: Clinique (Eye).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.
MONDAY.—10 A.M., Dr. Simson: Diseases of Women. 11 A.M., Mr. Addison: Demonstration of Minor Operations 12 noon, Dr. Bernstein: Pathological Demonstration. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Dr. Low: Plague.
TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 10.30 A.M., Surgical Registrar: Demonstration of Cases in Wards. 12 noon, Mr. T. Gray: Demonstration of Fractures, &c. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin 5 P.M., Lecture:—Mr. Pardoe: Clinical (Urinary Surgery).
WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 10.30 A.M., Medical Registrar: Demonstration of Cases in Wards. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. B. Harman: Diseases of the Eye. Dr. Simson: Diseases of Women. (No Lecture, College closed.)
THURSDAY.—10.30 A.M., Dr. Simson: Gynæcological Demonstration. 12.15 P.M., Lecture:—Dr. G. Stewart: Neurological Cases. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. Baldwin: Practical Surgery.
FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 10.30 A.M., Lecture:—Dr. Owen: Practical Medicine. 12.15 P.M., Lecture:—Dr. Bernstein: Clinical Pathology. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Mr. Pritchard: Clinical Pathology.
SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. B. Harman: Diseases of the Eye. 10.30 A.M., Surgical Registrar: Demonstration of Cases in Wards. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.
MONDAY.—Out-patient Demonstrations:—10 A.M. Dr. G. Holmes: Medical. Mr. H. Curtis: Surgical. 12 noon, Mr. G. N. Biggs: Throat, Nose, and Ear.——2.15 P.M., Mr. W. Turner: Surgery. 3 P.M., Mr. W. Turner: Operations. 3.15 P.M., Sir Dyce Duckworth: Medicine. 4.15 P.M., Mr. R. Lake: Ear and Throat.
TUESDAY.—Out-patient Demonstrations:—10 A.M., Dr. C. Singer: Medical. Mr. A. J. Walton: Surgical. 12 noon, Dr. H. MacCormac: Skin.——2 P.M., Mr. L. McGavin: Operations. 2.15 P.M., Mr. R. Carling: Surgery. 3.15 P.M., Dr. G. Rankin: Medicine. 4.15 P.M., Sir M. Morris: Skin Clinique.
WEDNESDAY.—Out-patient Demonstrations: 10 A.M., Dr. F. Langmead: Medical. Mr. P. Cole: Surgical. 11 A.M., Mr. R. B. Bickerton: Eye.——2 P.M., Mr. L. V. Cargill or Mr. Choyce: Operations. 2.15 P.M., Dr. F. Taylor: Medicine. 3.15 P.M., Mr. Cargill: Eye Clinique. 2.15 P.M., Mr. C. C. Choyce: Surgery. 4.30 P.M., Special Lecture:—Dr. J. Taylor: Epilepsy and its Treatment.
THURSDAY.—Out-patient Demonstrations:—10 A.M., Dr. G. Holmes: Medical. Mr. H. Curtis: Surgical. 12 noon, Mr. G. N. Biggs: Throat, Nose, and Ear.——2 P.M., Mr. R. Carling or Mr. W. Turner: Operations. Dr. A. Davies: Pathological Demonstration. 3.15 P.M., Dr. R. Wells: Medicine. 4.30 P.M., Special Lecture:—Sir StClair Thomson: Nasal Suppuration.
FRIDAY.—Out-patient Demonstrations:—10 A.M., Dr. C. Singer: Medical. Mr. A. J. Walton: Surgical. 12 noon, Dr. H. MacCormac: Skin.——2 P.M., Mr. L. McGavin: Operations. 2.15 P.M., Sir John Rose Bradford; Medicine 3.15 P.M., Mr. L. McGavin: Surgery. 3.15 P.M., Special Lecture:—Mr. McGavin: Gastric Ulcer and its Treatment.
SATURDAY.—Out-patient Demonstrations: 10 A.M., Dr. F. Langmead: Medical. Mr. P. Cole: Surgical. 11 A.M., Mr. R. B. Bickerton: Eye.——10 A.M., Dr. W. Steuart: Radiography.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.
MONDAY.—Clinics:—10.30 A.M., Surgical Out-patient (Mr. E. Gillespie). 2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Nose, Throat, and Ear (Mr. H. D. Gillies). 3 P.M., Clinical Pathology and Pathological Demonstration (Dr. W. H. Duncan).
TUESDAY.—Clinic; 2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld); Surgical (Mr. Howell Evans); Gynæcological (Dr. A. E. Giles). 3.30 P.M., Medical In-patient (Dr. A. J. Whiting).
WEDNESDAY.—Clinics:—2 P.M., Throat Operations (Mr. Gillies). 2.30 P.M., Children's Out-patient (Dr. T. R. Whipham); Skin (Dr. G. N. Meachen); Eye (Mr. R. P. Brooks). 3 P.M., X Rays (Mr. W. Steuart); Clinical Pathology and Pathological Demonstration (Dr. W. H. Duncan). 5.30 P.M., Eye Operations (Mr. Brooks). 4.30 P.M., Lecture:—Mr. H. D. Gillies: Tuberculosis of the Larynx.
THURSDAY.—2.30 P.M., Gynæcological Operations (Dr. A. E. Giles). Clinics:—Medical Out-patient (Dr. A. J. Whiting); Surgical (Mr. Carson). 3 P.M., Medical In-patient (Dr. G. P. Chappel).
FRIDAY.—2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld): Surgical (Mr. E. Gillespie); Eye (Mr. R. P. Brooks). 3 P.M., Medical In-patient (Dr. R. M. Leslie); Clinical Pathology and Pathological Demonstration (Dr. W. A. Duncan). 4.30 P.M., Lecture:—Dr. R. M. Leslie: Hilus versus Apical Tuberculosis.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.
MONDAY.—1.30 P.M., Department for the Prevention of Consumption. 2 P.M., Out-patient Department—Room III., Dr. M. Leslie; Room IV., Dr. S. Thompson. 4 P.M., Wards, Dr. M. Leslie. 4.30 P.M. to 5.30 P.M., Lecture Hall, Lecture-Demonstration.
TUESDAY.—1.30 P.M., Department for the Prevention of Consumption. 2 P.M., Out-patient Department—Room III., Dr. Phear; Room IV., Dr. B. King. 2 P.M., Operations and Throat Clinic, Mr. A. Evans. 3 P.M., Wards, Dr. White. 3.30 P.M., Wards, Dr. Phear. 4.30 P.M., to 5.30 P.M., Lecture Hall, Lecture-Demonstration.
WEDNESDAY.—2 P.M., Wards, Dr. A. Davies. Out-patient Department—Room III., Dr. Drysdale; Room IV., Dr. Kellie. 4 P.M., Wards, Dr. Drysdale. 4.30 P.M., Roentgen Ray Department, Dr. Jordan. 7 P.M., Department for the Prevention of Consumption.
THURSDAY.—9.30 A.M., Dental Department, Mr. G. Thomson. 1.30 P.M., Department for the Prevention of Consumption. 2 P.M., Out-patient Department—Room III., Dr. M. Leslie; Room IV., Dr. S. Thompson. 4.30 P.M. to 5.30 P.M., Lecture Hall, Lecture-Demonstration.
FRIDAY.—1.30 P.M., Department for the Prevention of Consumption. 2 P.M., Wards, Dr. Calvert. Out-patient Department—Room III., Dr. Phear; Room IV., Dr. B. King. 3.30 P.M., A Special Clinical Demonstration by one of the Out-patient Physicians.
SATURDAY.—10 A.M., Out-patient Department—Room III., Dr. Drysdale; Room IV., Dr. Kellie. 11.30 A.M., Roentgen Ray Department, Dr. Jordan.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.
THURSDAY.—4 P.M., Mr. McMullen: Prevention of Defective Vision.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.
TUESDAY.—,—3.30 P.M., Clinical Lecture:—Dr. H. Tooth: Clinical Cases.
FRIDAY.—3.30 P.M., Clinical Lecture:—Dr. L. Paton: Ocular Paralysis.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.
WEDNESDAY.—4.30 P.M., Lecture:—Dr. B. Shaw: The Clinical Diagnosis of Occult Pulmonary Tuberculosis by means of Tuberculin.

QUEEN'S HOSPITAL FOR CHILDREN, Board Room of the Hospital, Hackney-road, N.E.
WEDNESDAY.—4 P.M., Dr. E. Bellingham-Smith: Mental Deficiency in Childhood.

LISTER INSTITUTE OF PREVENTIVE MEDICINE, Chelsea Gardens, Chelsea Bridge-road, S.W.
FRIDAY.—4 P.M., Lecture:—Dr. Ledingham: Some Problems of Immunity.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, 49, Leicester-square, W.C.
TUESDAY.—2 P.M., Dr. W. Griffith: The Pathology of the Skin. 6 P.M., Mr. W. Hampson: X Rays. Epilation for Ringworm.
THURSDAY.—6 P.M., Dr. M. Dockrell: Paratuberculides (due to Tuberculous Toxins):—I., Macular; II., Papular; III., Pustular; IV., Pigmentary.

ROYAL DENTAL HOSPITAL OF LONDON SCHOOL OF DENTAL SURGERY.
TUESDAY.—6 P.M., Mr. W. W. James: Treatment of Root Canals. (Post-Graduate Lecture.)

ANCOATS HOSPITAL, Manchester.

THURSDAY.—4.15 P.M., Dr. C. H. Melland: Some Causes of Undergrowth in Children. (Post-Graduate Clinic.)

MANCHESTER ROYAL INFIRMARY.

TUESDAY.—4.30 P.M., Dr. Donald: Gynæcological Cases. (Post-Graduate Clinic.)

FRIDAY.—4.30 P.M., Mr. H. H. Rayner: Inguinal and Umbilical Hernia in Infants. (Post-Graduate Clinic.)

SALFORD ROYAL HOSPITAL.

TUESDAY.—Dr. F. E. Tylecote: Points in the Treatment of Heart Disease. (Post-Graduate Demonstration.)

For further particulars of the above Lectures, &c., see Advertisement Pages.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (2nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

TUESDAY (3rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.), Royal National Orthopædic (9.30 A.M. and 4 P.M.).

WEDNESDAY (4th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

THURSDAY (5th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal National Orthopædic (9 A.M. and 3.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M. Aural and Ophthalmic), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

FRIDAY (6th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.) Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Royal National Orthopædic (3.30 P.M.), Soho-square (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

SATURDAY (7th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9.30 A.M.), West London (2.30 P.M.).

At the Royal Eye (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic (2 P.M.) Hospitals operations are performed daily. At the Western Ophthalmic Hospital operations are performed on Monday, Tuesday, Thursday, and Friday at 3 P.M., and on Wednesday and Saturday at 11 A.M.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 27th, 1912.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Nov. 21	30·18	W.	...	55	52	45	44	47	Overcast
,, 22	30·36	W.	0·03	65	55	47	47	47	Foggy
,, 23	30·35	W.	...	58	53	47	48	50	Fine
,, 24	30·23	W.	0·17	69	53	45	48	51	Fine
,, 25	30·03	S.W.	...	61	54	45	47	50	Overcast
,, 26	29·62	S.W.	0·24	57	54	44	51	52	Raining
,, 27	29·30	W.	0·33	47	43	39	38	39	Fine

The following journals, magazines, &c., have been received.—Office International d'Hygiène Publique, Dublin Journal of Medical Science, Journal d'Urologie, Canadian Practitioner and Review, Albany Medical Annals, Hospital Assistant, Interstate Medical Journal, Philippine Journal of Science, La Policlinique, Journal of Genetics, Transvaal Medical Journal, Le Monde Médical, Duodecim, Guy's Hospital Gazette, Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris, Revue de Médecine, Revue de Chirurgie, Bulletin de la Société de l'Internat des Hôpitaux de Paris.

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